

GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
OM protein - protein search, using sw model
Run on: December 4, 2003, 19:20:30 ; Search time 35 Seconds
(without alignments)
3092.643 Million cell updates/sec

Title: US-09-294-539-4
Perfect score: 2952
Sequence: 1 MEPTSHVTAFSDSDASV.....RSLGSSSSSTSGAIRPRR 582

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 684280 seqs, 185983659 residues

Total number of hits satisfying chosen parameters: 684280

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA:
1: /cgn2_6/ptodata/2/pubaa/US07_PUBCOMB.pep.*
2: /cgn2_6/ptodata/2/pubaa/PCT_NEW_PUB.pep.*
3: /cgn2_6/ptodata/2/pubaa/US06_NEW_PUB.pep.*
4: /cgn2_6/ptodata/2/pubaa/US06_PUBCOMB.pep.*
5: /cgn2_6/ptodata/2/pubaa/US07_NEW_PUB.pep.*
6: /cgn2_6/ptodata/2/pubaa/PCTUS_PUBCOMB.pep.*
7: /cgn2_6/ptodata/2/pubaa/US08_NEW_PUB.pep.*
8: /cgn2_6/ptodata/2/pubaa/US08_PUBCOMB.pep.*
9: /cgn2_6/ptodata/2/pubaa/US09A_PUBCOMB.pep.*
10: /cgn2_6/ptodata/2/pubaa/US09B_PUBCOMB.pep.*
11: /cgn2_6/ptodata/2/pubaa/US09C_PUBCOMB.pep.*
12: /cgn2_6/ptodata/2/pubaa/US09_NEW_PUB.pep.*
13: /cgn2_6/ptodata/2/pubaa/US10A_PUBCOMB.pep.*
14: /cgn2_6/ptodata/2/pubaa/US10B_PUBCOMB.pep.*
15: /cgn2_6/ptodata/2/pubaa/US10C_PUBCOMB.pep.*
16: /cgn2_6/ptodata/2/pubaa/US10_NEW_PUB.pep.*
17: /cgn2_6/ptodata/2/pubaa/US60_NEW_PUB.pep.*
18: /cgn2_6/ptodata/2/pubaa/US60_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	2934	99.4	582	12	US-09-848-841-10
2	1737	58.8	576	12	US-10-328-675A-4
3	1672.5	56.7	588	8	US-08-908-884-14
4	1672.5	56.7	588	9	US-09-908-323-14
5	1672.5	56.7	588	12	US-10-328-675A-2
6	1629	55.2	604	12	US-10-328-675A-64
7	1276	43.2	593	8	US-08-908-884-3
8	1276	43.2	593	9	US-09-908-323-3
9	1276	43.2	593	11	US-09-934-455-74
10	1276	43.2	593	12	US-09-848-841-17
11	1276	43.2	593	13	US-10-225-068-242
12	1276	43.2	593	14	US-10-079-035-3
13	1222.5	41.4	579	12	US-10-328-675A-6
14	1213.5	41.1	600	12	US-10-328-675A-20
15	1213.5	41.1	601	11	US-09-934-455-434

16	1213.5	41.1	601	12	US-10-328-675A-72
17	1117.5	37.9	635	12	US-09-848-841-16
18	1060.5	35.9	591	12	US-10-328-675A-66
19	1045.5	35.4	592	14	US-10-047-593-2
20	1045.5	35.4	592	14	US-10-047-593-4
21	1045.5	35.4	609	15	US-10-318-780-11
22	1045.5	35.4	607	15	US-10-318-780-10
23	1031	34.9	586	12	US-10-328-675A-8
24	1009	34.2	574	12	US-10-328-675A-70
25	995	33.7	475	15	US-10-318-780-4
26	987	33.4	455	12	US-09-848-841-12
27	971.5	32.9	601	15	US-10-328-675A-18
28	844.5	28.6	409	15	US-10-318-780-21
29	839.5	28.4	533	11	US-09-934-455-402
30	825	27.9	217	12	US-10-328-675A-46
31	823	27.9	219	12	US-10-328-675A-30
32	801.5	27.2	467	11	US-09-934-455-28
33	801.5	27.2	467	12	US-10-225-068-170
34	782.5	26.5	381	15	US-10-318-780-17
35	739	25.0	325	12	US-09-848-841-8
36	678	23.0	369	12	US-10-328-675A-74
37	644	21.8	165	12	US-10-328-675A-38
38	614	20.8	165	12	US-10-328-675A-40
39	599	20.3	165	12	US-10-328-675A-42
40	597	20.2	235	15	US-10-219-220-290
41	502.5	17.0	180	15	US-10-318-780-35
42	493	16.7	165	12	US-10-328-675A-58
43	485	16.4	165	12	US-10-328-675A-32
44	477	16.2	165	12	US-10-328-675A-34
45	470	15.9	165	12	US-10-328-675A-48

ALIGNMENTS

RESULT 1
US-09-848-841-10
; Sequence 10, Application US/09848841
; Publication No. US20030172411A1
; GENERAL INFORMATION:
; APPLICANT: E. I. du Pont de Nemours and Company
; APPLICANT: Butler, Karla
; APPLICANT: Falco, Carl
; APPLICANT: Famodu, Omolayo O.
; APPLICANT: Fang, Yiwen
; APPLICANT: Han, Feng
; APPLICANT: Heppard, Elmer
; APPLICANT: Liu, Zhan-Bin
; APPLICANT: Miao, Gou-Hau
; APPLICANT: Odell, Joan
; APPLICANT: Rafalaki, Antoni
; TITLE OF INVENTION: Disease Resistance Factors
; FILE REFERENCE: B1252 US NAI
; CURRENT APPLICATION NUMBER: US/09/848,841
; CURRENT FILING DATE: 2001-05-04
; PRIOR APPLICATION NUMBER: 60/107,242
; PRIOR FILING DATE: 1998-11-05
; PRIOR APPLICATION NUMBER: US99/25,953
; PRIOR FILING DATE: 1999-10-04
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: Microsoft Office 97
; SEQ ID NO 10
; LENGTH: 582
; TYPE: PRT
; ORGANISM: Oryza sativa
US-09-848-841-10

Query Match 99.4%; Score 2934; DB 12; Length 582;
Best Local Similarity 99.5%; Pred. No. 7.9e-262;
Matches 579; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Oy 1 MEPTSHVTAFSDSDASVEGDADADAVEALRRLLSDNLAAAFRSPDFPAFLADARIA 60

Db 1 MPPPTSHVNTAFSDSDSASVEEGADADADVEALRLSLDNLAARFRSPEDFAFLADARIA 60
Qy 61 VPGGGGGDLRVHRCVLSARSFLRGVFAARRAAAAGGGGDCSRLELRELLGGGGBE 120
Db 61 VPGGGGGDLRVHRCVLSARSFLRGVFAARRAAAAGGGGDCSRLELRELLGGGGBE 120
Qy 121 VEYGEALRLVLDLYLSGRVGDLPKAAACLCVDEDCAHVGHCPAVAFMAQVLAFAASTFOVA 180
Db 121 VEYGEALRLVLDLYLSGRVGDLPKAAACLCVDEDCAHVGHCPAVAFMAQVLAFAASTFOVA 180
Qy 181 ELTNLFQRRLLDVLDKVEVDNLLILSVANLCKNSCKMLERCLDMVVRNLDMLTLEKS 240
Db 181 ELTNLFQRRLLDVLDKVEVDNLLILSVANLCKNSCKMLERCLDMVVRNLDMLTLEKS 240
Qy 241 LPDVLKQIIDARLSLGLSPENKGFPHKVRRIHRAALSDDDVELVRLMLTTEGQTNLDDA 300
Db 241 LPDVLKQIIDARLSLGLSPENKGFPHKVRRIHRAALSDDDVELVRLMLTTEGQTNLDDA 300
Qy 301 FALHYAVEHCDSKITTELDDALADVNHNRNPRGYTVLHIAARRRPPKIIIVSLITKGARPA 360
Db 301 FALHYAVEHCDSKITTELDDALADVNHNRNPRGYTVLHIAARRRPPKIIIVSLITKGARPA 360
Qy 361 DVTFDGRKAVQISKRLTKQDYGFGVTEEGKSPKORLCIEILEQAERRDPQLGEASVSLA 420
Db 361 DVTFDGRKAVQISKRLTKQDYGFGVTEEGKSPKORLCIEILEQAERRDPQLGEASVSLA 420
Qy 421 MAGESLRGRLLYLENRVVALARIMFMEARVAMDIQVDTGLEFNLGSGANPPPERQRTTV 480
Db 421 MAGESLRGRLLYLENRVVALARIMFMEARVAMDIQVDTGLEFNLGSGANPPPERQRTTV 480
Qy 481 DLNESPFIKBEHLARMTALSKTVELGKFFPRCSNVLDKIMDDTDPVSLGRDTSAEKR 540
Db 481 DLNESPFIKBEHLARMTALSKTVELGKFFPRCSNVLDKIMDDTDPVSLGRDTSAEKR 540
Qy 541 KRPHLDQVLOKAFHEDKEENDRSGLSSSSSSTSGAIRPRR 582
Db 541 KRPHLDQVLOKAFHEDKEENDRSGLSSSSSSTSGAIRPRR 582

RESULT 2

US-10-328-675A-4
; Sequence 4, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weiolo, Laura
; APPLICANT: Willits, Michael
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: 30857USNPDI
; CURRENT APPLICATION NUMBER: US/10/328,675A
; PRIOR FILING DATE: 2002-12-23
; PRIOR FILING DATE: 2000-03-06
; PRIOR FILING DATE: 2000-03-06
; PRIOR FILING DATE: 1999-03-09
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 576
; TYPE: PRT
; ORGANISM: Lycopersicon esculentum
US-10-328-675A-4

Query Match 58.8%; Score 1737; DB 12; Length 576;
Best Local Similarity 59.9%; Pred No. 2.3e-151;
Matches 349; Conservative 94; Mismatches 108; Indels 32; Gaps 8;
Qy 11 AFSOSDSAS-----VEEGADADADVEALRLSLDNLAARF-RSPEDFAFLADARIAVP 62
Db 6 AFSNDISGSSSICCMNESETSL-ADVNSLKLSETLESIFDASAPDFDFAKLLAP 64
Qy 63 GGGGGGDLRVHRCVLSARSFLRGVFAARRAAAAGGGGDCSRLELRELLGGGGBE 122

Db 65 ----CGKEIPVHRCILSARSFFKNVFC-----GKDSSTKLELKEIM----KEYE 106
Qy 123 VGYEALRLVLDLYLSGRVGDLPKAAACLCVDEDCAHVGHCPAVAFMAQVLAFAASTFOVAEL 182
Db 107 VSFDVAVSVLAYLSYSGKVRPASKDVCVCDNECLHVACRPVAFVFWQVLYASFQISQL 166
Qy 183 TNLQRRLLDVLDKVEVDNLLILSVANLCKNSCKMLERCLDMVVRNLDMLTLEKS 242
Db 167 VDKFQRRLLDVLDKVADDDVMVLSVANICGKACERLLSRCIDIVKSNVDIITLDSLP 226
Qy 243 PDVTKQIIDARLSLGLSPENKGFPHKVRRIHRAALSDDDVELVRLMLTTEGQTNLDDAFA 302
Db 227 HDIVKQITDSAEGLQGPESNGFPDKVKRIHRAALSDDDVELVRLMLTTEGQTNLDDAFA 286
Qy 303 LHYAVEHCDSKITTELDDALADVNHNRNPRGYTVLHIAARRRPPKIIIVSLITKGARPA 362
Db 287 LHYAVAYCDAKTTAEILLDSLADVNHQNPGRGHTVLHVAAMRKEPKIIIVSLITKGARPSDL 346
Qy 363 TFDGRKAVQISKRLTKQDYGFGVTEEGKSPKORLCIEILEQAERRDPQLGEASVSLAMA 422
Db 347 TSDGKKAQIAKRLTRLVDFTKTEEGKSAKPKORLCIEILEQAERRDPQLGEASVSLAMA 406
Qy 423 GESLRGRLLYLENRVVALARIMFMEARVAMDIQVDTGLEFNLGSGANPPPERQRTTVDL 482
Db 407 GDDLRLKLLLYLENRVGLAKLLFPMEAKVAMDIQVDTSELPLASMRKKIADAOQRTTVDL 466
Qy 483 NESPFIMKBEHLARMTALSKTVELGKFFPRCSNVLDKIM--DDETDPVSLGRDTSAB-- 538
Db 467 NEAPFKKKEHLARLRSRTVELGKFFPRCSNVLNKIMDADDLSEIAYMGNDTVEERQ 526
Qy 539 -KRKREHLDQVLOKAFHEDKEENDRSGLSSSSSSTSGAIRP 580
Db 527 LKQRYMELQVILSKAFTEDEKBEFAKTNMSSSSSTSGKVDKP 569

RESULT 3

US-08-908-884-14
; Sequence 14, Application US/08908884
; Publication No. US20020138872A1
; GENERAL INFORMATION:
; APPLICANT: Dong et al.
; TITLE OF INVENTION: ACQUIRED RESISTANCE GENES AND USES THEREOF
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Clark & Elbing LLP
; STREET: 176 Federal Street
; CITY: Boston
; STATE: MA
; COUNTRY: USA
; ZIP: 02110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/908,884
; FILING DATE:
; CLASSIFICATION: 800
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 60/023,851
; FILING DATE: August 9, 1996
; APPLICATION NUMBER: 60/035,166
; FILING DATE: January 10, 1997
; APPLICATION NUMBER: 60/046,769
; FILING DATE: May 16, 1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Elbing, Karen L
; REGISTRATION NUMBER: 35,238
; REFERENCE/DOCKET NUMBER: 00786/339004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-428-0200
; TELEFAX: 617-428-7045


```

RESULT 5
US-10-328-675A-2
; Sequence 2, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: 30857USNPDIIV1
; CURRENT APPLICATION NUMBER: US/10/328,675A
; CURRENT FILING DATE: 2002-12-23
; PRIOR APPLICATION NUMBER: 09/519,232
; PRIOR FILING DATE: 2000-03-06
; PRIOR APPLICATION NUMBER: 60/219,338
; PRIOR FILING DATE: 1999-03-09
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 588
; TYPE: PRT
; ORGANISM: Nicotiana tabacum
US-10-328-675A-2

Query Match          56.7%; Score 1672.5; DB 12; Length 588;
Best Local Similarity 56.8%; Pred. No. 2.2e-145;
Matches 336; Conservative 102; Mismatches 119; Indels 35; Gaps

QY 11 AFSDSDSASVEE-----GDADADAVEALRLRLSDNLAAP-RSPEDFAFLAD 56
DB 7 AFSDSNDISGSSICIGGWTFFSPETSPAETISLKRILSETLSEIFDASJPEFDYFAD 66
QY 57 ARIAVPGGGGGGDLRVRHRCVLSARSPFLRGVFAPRAAAAAGGGGDBGGERLELRELLGG 116
DB 67 AKLVV---SGPCKEIPVHRCLISARSPPFFKNLFC-----GKKEKNSKSKVELKEVM-- 113
QY 117 GGEVEVGEYALRLVLDVLYSGRVDLPKAACLVDEDCAHVCHCHPAVAFMAQVLFPAAST 176
DB 114 --KEHVSVDVMSVLAFLYLSGKVRPSPKOVCCVNDNCDSHVACRPAVAPFLVEVLYTSFT 171
QY 177 FQVAELTNLFORLLDVLDKVEVDNLILLISVANLCNKSCKMILLERCLDMVVRSLNDMIT 236
DB 172 FQISELVDFQFRLHLLDLDKTAADDVMMVLVSVANICGKACERLLSSCIEIIVKSNVDIIT 231
QY 237 LEKSLPPDVIKQIIDARLSLGLISPEKNGPPNKHVRIIRHALSDSDVELVRMLLTGQTN 296
DB 232 LDKALPHDIVKQITDSRAELGLOGPESGPPDKHVRIIRHALSDSDVELLQMLLREGHTT 291
QY 297 LDDAFALHYAVEHCDSKITTELLDALADVNNRNPGRYTVLHTAARRRBPKEIIVSLLTKG 356
DB 292 LDDAYALHYAVAYCDAKTTAEALLDALADINHNSRGYTVLHVAAKRBPKEIIVSLLTKG 351
QY 357 ARPADVTDGKRAVOISKRLTKQGDIYGVGTVEGKPSKPRCLCTEILEQAERDDPOLGEAS 416
DB 352 ARPSDLTSDGRKALQIAKRLTRLVDFSKSPPEGKASNDRLCTEILEQAERDDPILGEAS 411
QY 417 VSLMAGSLRGLLYLENRYALARIWPEARVAMDIAQVDCITLSEFNLSGANPPPERQ 476
DB 412 VSLWAGDDLRMLKLYLENRYVGLAKILFPPEAKVAMDIAQVDCGTSEFFPLASTGKXWANAQ 471
QY 477 RTTVDLNESPFMTKEEHLARMTALSKTVELGKGFPPRCNSNVLDKIM--DDEDTVSLGRD 534
DB 472 RTTVDLNEAPFKIEEHLNRLRALSRIVELGKGFPPRCSEVLNKIMDADDSLEIAYMGND 531
QY 535 TSAE---KRKPHDLQDVLOKAFHEDKEENDR-SGLSSSSSSSTSGIAIPRR 582
DB 532 TAEEERQLKKQRYMELQEILITKAFTEDEKEEDYKTNNTSSSCSSSTSGKGVDPNK 583

```

RESULT 6
US-10-328-675A-64
; Sequence 64, Application US/10328675A

[illegible]

```
;
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Clark & Elbing LLP
; STREET: 176 Federal Street
; CITY: Boston
; STATE: MA
; COUNTRY: USA
; ZIP: 02110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/908,884
; FILING DATE:
; CLASSIFICATION: 800
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 60/023,851
; FILING DATE: August 9, 1996
; APPLICATION NUMBER: 60/035,166
; FILING DATE: January 10, 1997
; APPLICATION NUMBER: 60/046,769
; FILING DATE: May 16, 1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Elbing, Karen L
; REGISTRATION NUMBER: 35,238
; REFERENCE/DOCKET NUMBER: 00786/339004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-428-0200
; TELEFAX: 617-428-7045
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 593 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-908-884-3

Query Match 43.2%; Score 1276; DB 8; Length 593;
Best Local Similarity 47.2%; Pred. No. 8.7e-109;
Matches 273; Conservative 113; Mismatches 165; Indels 28; Gaps 9;

Qy 5 TSHVTNAPSDDSASVEEGDADADAEALRLSDNLAAPRSPEDFAFLADARAVPGG 64
Db 17 TSFVATDNTDSSIVYLAABEQVLTGPDVSAQLLSNSFESVDFSPDD--FYSDAKLVL--- 71
Qy 65 GGGGDLRVHRCVLSARSPFURGVFARRAAAAAGGGGDSERLELRLGGGSEVEVG 124
Db 72 -SDGREVSFHRVLSARSPFURGVFARRAAAAAGGGGDSERLELRLGGGSEVEVG 124
Qy 125 YEALRLVLDYLSGRVGLPKAACLCVDEDCAHVGHCHPAVAFMAQVLFPAASTFQVAELTN 184
Db 125 FDSVVTVLAYVYSSVRPPPKGVSCADENCCVACRPADVPMLEVLYLAFIFKIPELIT 184
Qy 185 LQRRLLDVLKVEVDNLLILSVANLCKNSCKMLLERCLDMVVRNSLDMITLKSLLPD 244
Db 185 LYQRLLDVLKVEVDNLLILSVANLCKNSCKMLLERCLDMVVRNSLDMITLKSLLPD 244
Qy 245 VIKQIIDARLSLGLSPENKGPFPKHVRIIRALSDDDVLRMLLTGQTNLDDAFALH 304
Db 245 LVKEIIDRRKELGLVPRVKV----KHVSNVHKAALSDDDIELVKLLKEDHTNLDACALH 300
Qy 305 YAVEHCDSKITTEILDALADVNNHNPGRYTVLHIAARRREPKIIVSLITKCARADVTF 364
Db 301 FAVAYCNKVTATDLLKLDLADVNNHNPGRYTVLHIAARRREPKIIVSLITKCARADVTF 360
Qy 365 DGRKAVQISKRUTKQDYGVTVEEGKPSPKDRLCITLLEQARRRDPQLGEASVSLAMAGE 424
Db 361 EGRALMTAKQMTAVECNIEPQCKHSLKGRCLVCLEILEQEDRQIQIPDVPPPSFAVAAD 420
Qy 425 SLRGRLLYLENRVALARINFPMPEARVAMDIAQVDGTLFNLGSGANPPPER----QRTTV 480

;
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Clark & Elbing LLP
; STREET: 176 Federal Street
; CITY: Boston
; STATE: MA
; COUNTRY: USA
; ZIP: 02110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/908,323
; FILING DATE:
; CLASSIFICATION: 800
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 60/023,851
; FILING DATE: August 9, 1996
; APPLICATION NUMBER: 60/035,166
; FILING DATE: January 10, 1997
; APPLICATION NUMBER: 60/046,769
; FILING DATE: May 16, 1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Elbing, Karen L
; REGISTRATION NUMBER: 35,238
; REFERENCE/DOCKET NUMBER: 00786/339004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-428-0200
; TELEFAX: 617-428-7045
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 593 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-09-908-884-3

Query Match 43.2%; Score 1276; DB 9; Length 593;
Best Local Similarity 47.2%; Pred. No. 8.7e-109;
Matches 273; Conservative 113; Mismatches 165; Indels 28; Gaps 9;

Qy 5 TSHVTNAPSDDSASVEEGDADADAEALRLSDNLAAPRSPEDFAFLADARAVPGG 64
Db 17 TSFVATDNTDSSIVYLAABEQVLTGPDVSAQLLSNSFESVDFSPDD--FYSDAKLVL--- 71
Qy 65 GGGGDLRVHRCVLSARSPFURGVFARRAAAAAGGGGDSERLELRLGGGSEVEVG 124
Db 72 -SDGREVSFHRVLSARSPFURGVFARRAAAAAGGGGDSERLELRLGGGSEVEVG 124
Qy 125 YEALRLVLDYLSGRVGLPKAACLCVDEDCAHVGHCHPAVAFMAQVLFPAASTFQVAELTN 184
Db 125 FDSVVTVLAYVYSSVRPPPKGVSCADENCCVACRPADVPMLEVLYLAFIFKIPELIT 184
Qy 185 LQRRLLDVLKVEVDNLLILSVANLCKNSCKMLLERCLDMVVRNSLDMITLKSLLPD 244
Db 185 LYQRLLDVLKVEVDNLLILSVANLCKNSCKMLLERCLDMVVRNSLDMITLKSLLPD 244
Qy 245 VIKQIIDARLSLGLSPENKGPFPKHVRIIRALSDDDVLRMLLTGQTNLDDAFALH 304
Db 245 LVKEIIDRRKELGLVPRVKV----KHVSNVHKAALSDDDIELVKLLKEDHTNLDACALH 300
Qy 305 YAVEHCDSKITTEILDALADVNNHNPGRYTVLHIAARRREPKIIVSLITKCARADVTF 364
Db 301 FAVAYCNKVTATDLLKLDLADVNNHNPGRYTVLHIAARRREPKIIVSLITKCARADVTF 360
Qy 365 DGRKAVQISKRUTKQDYGVTVEEGKPSPKDRLCITLLEQARRRDPQLGEASVSLAMAGE 424
Db 361 EGRALMTAKQMTAVECNIEPQCKHSLKGRCLVCLEILEQEDRQIQIPDVPPPSFAVAAD 420
Qy 425 SLRGRLLYLENRVALARINFPMPEARVAMDIAQVDGTLFNLGSGANPPPER----QRTTV 480
```



```
Matches 273; Conservative 113; Mismatches 165; Indels 28; Gaps 9;
QY 5 TSHVTNPFSDSDASVEEGDADADVEALRRLSDNLAARSPEDFAFLADARIAVPGG 64
Db 17 TSFVATDNTDSIVYLAEEQVLTGPDVSALQSLNSFESVFDSPDD--FYSDAKLVL--- 71
QY 65 GGGGDLVHRCVLSARSPFLRGVFAARRAAAGGGGDSERLELRELLGGGGEVEVG 124
Db 72 -SDGREVSFHRCLVSARSFFKSALA--AAKKEKSDNNNTAAVKLEKEI---AKDYEVG 124
QY 125 YEALRLVLDLYSGRVGDLPKAACLCVDEDCAHVCHPAPVAFMAQVLFPAASTFQVAELTN 184
Db 125 FDSVVTVLAYVYSSRVPPKGVSCADENCHVACRPVDFMELVLYLAFIKIPELIT 184
QY 185 LFQRLLDVLDKVEVDNLLILSVANLCNCKSMKLLERCLDMVVRNSNLDMLTLEKSLPPD 244
Db 185 LYQRHLLDVVDKVIETDLVILKLANICGKACMKLLDRCKEIIIVKSNVDMVLSLEKSLPEE 244
QY 245 VIKQIIDARLSLGLISPENKGFNNKHVRIHRAALSDDDVELVRLMLLTGQTNLDDAFALH 304
Db 245 LVKEIIDRRKELGLEVPKVK---KHVSNVHKALSDDDIELVKLLKEDHTNLDACALH 300
QY 305 YAVEHCDSKIITTELDLADLVNHRNPRGYTVLHIAARRRBPKIIVSLLTGKARADVTFF 364
Db 301 FAVAYCNVKTATDLKLADLVNHRNPRGYTVLHVAAWRKEPQLILSLEKGSASEATL 360
QY 365 DGRKAVQISKLTQKGDYFGVTEEGKPSKDLRCLTEILEQAERRDPQGEASVSLAMAGE 424
Db 361 EGRRTALMAKQATMAVECNNIPEQCKHSLKGRCLVLEIQEDKREQIIPRDVPPSFAVAAD 420
QY 425 SLRGRLLYLNRVALARIMFPMEARVAMDIQVDTGLEFNLGSGANPPPER-----QRTTV 480
Db 421 ELKMTLLDLENRVALAQRLLFPTEAQAAMEIAEMKGTCEFI VTS---LEPDRLTGKRTSP 477
QY 481 DLNESPFIMKEBHLARMTALSKTVELGKRFPRCSNVLDKIND--DETDPVSLGRDTSAEK 539
Db 478 GVKIAPFRILEBHQSRKALSKTVELGKRFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537
QY 540 R-----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSSTS 574
Db 538 RLQKKRYMEIQETLKKAFSEDNLELGNSSLTDSSTS 576

RESULT 11
US-10-225-068-242
; Sequence 242, Application US/10225068
; Publication No. US20030217383A1
; GENERAL INFORMATION:
; APPLICANT: Mendel Biotechnology, Inc.
; APPLICANT: Reuber, T. Lynne
; APPLICANT: Riechmann, Jose Luis
; APPLICANT: Heard, Jacqueline E.
; APPLICANT: Jiang, Cai-Zhong
; APPLICANT: Adam, Luc J.
; APPLICANT: Dubell, Arnold T.
; APPLICANT: Ratcliffe, Oliver
; APPLICANT: Pineda, Omaisra
; APPLICANT: Yu, Guo-Liang
; APPLICANT: Broun, Pierre E.
; TITLE OF INVENTION: STRESS-RELATED POLYNUCLEOTIDES AND
; FILE OF INVENTION: POLYPEPTIDES IN PLANTS
; CURRENT APPLICATION NUMBER: US/10/225,068
; CURRENT FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 60/310,847
; PRIOR FILING DATE: 2001-08-09
; PRIOR APPLICATION NUMBER: 60/336,049
; PRIOR FILING DATE: 2001-11-19
; PRIOR APPLICATION NUMBER: 60/338,692
; PRIOR FILING DATE: 2001-12-11
; PRIOR APPLICATION NUMBER: 10/171,468
; PRIOR FILING DATE: 2002-06-14
; NUMBER OF SEQ ID NOS: 246
```

```
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 242
; LENGTH: 593
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: DOMAIN
; LOCATION: (2)...(593)
; OTHER INFORMATION: Conserved domain
US-10-225-068-242

Query Match 43.2%; Score 1276; DB 12; Length 593;
Best Local Similarity 47.2%; Pred. No. 8.7e-105;
Matches 273; Conservative 113; Mismatches 165; Indels 28; Gaps 9;
QY 5 TSHVTNPFSDSDASVEEGDADADVEALRRLSDNLAARSPEDFAFLADARIAVPGG 64
Db 17 TSFVATDNTDSIVYLAEEQVLTGPDVSALQSLNSFESVFDSPDD--FYSDAKLVL--- 71
QY 65 GGGGDLVHRCVLSARSPFLRGVFAARRAAAGGGGDSERLELRELLGGGGEVEVG 124
Db 72 -SDGREVSFHRCLVSARSFFKSALA--AAKKEKSDNNNTAAVKLEKEI---AKDYEVG 124
QY 125 YEALRLVLDLYSGRVGDLPKAACLCVDEDCAHVCHPAPVAFMAQVLFPAASTFQVAELTN 184
Db 125 FDSVVTVLAYVYSSRVPPKGVSCADENCHVACRPVDFMELVLYLAFIKIPELIT 184
QY 185 LFQRLLDVLDKVEVDNLLILSVANLCNCKSMKLLERCLDMVVRNSNLDMLTLEKSLPPD 244
Db 185 LYQRHLLDVVDKVIETDLVILKLANICGKACMKLLDRCKEIIIVKSNVDMVLSLEKSLPEE 244
QY 245 VIKQIIDARLSLGLISPENKGFNNKHVRIHRAALSDDDVELVRLMLLTGQTNLDDAFALH 304
Db 245 LVKEIIDRRKELGLEVPKVK---KHVSNVHKALSDDDIELVKLLKEDHTNLDACALH 300
QY 305 YAVEHCDSKIITTELDLADLVNHRNPRGYTVLHIAARRRBPKIIVSLLTGKARADVTFF 364
Db 301 FAVAYCNVKTATDLKLADLVNHRNPRGYTVLHVAAWRKEPQLILSLEKGSASEATL 360
QY 365 DGRKAVQISKLTQKGDYFGVTEEGKPSKDLRCLTEILEQAERRDPQGEASVSLAMAGE 424
Db 361 EGRRTALMAKQATMAVECNNIPEQCKHSLKGRCLVLEIQEDKREQIIPRDVPPSFAVAAD 420
QY 425 SLRGRLLYLNRVALARIMFPMEARVAMDIQVDTGLEFNLGSGANPPPER-----QRTTV 480
Db 421 ELKMTLLDLENRVALAQRLLFPTEAQAAMEIAEMKGTCEFI VTS---LEPDRLTGKRTSP 477
QY 481 DLNESPFIMKEBHLARMTALSKTVELGKRFPRCSNVLDKIND--DETDPVSLGRDTSAEK 539
Db 478 GVKIAPFRILEBHQSRKALSKTVELGKRFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537
QY 540 R-----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSSTS 574
Db 538 RLQKKRYMEIQETLKKAFSEDNLELGNSSLTDSSTS 576

RESULT 12
US-10-079-035-3
; Sequence 3, Application US/10079035
; Publication No. US20020152499A1
; GENERAL INFORMATION:
; APPLICANT: Ryals, John
; APPLICANT: Delaney, Terry
; APPLICANT: Friedrich, Leelie
; APPLICANT: Weymann, Kristiana
; APPLICANT: Lawton, Kay
; APPLICANT: Ellis, Daniel
; APPLICANT: Uknes, Scott
; APPLICANT: Jesse, Taco
; APPLICANT: Vos, Pieter
; TITLE OF INVENTION: GENE ENCODING A PROTEIN INVOLVED IN THE
; SIGNAL TRANSDUCTION CASCADE LEADING TO SYSTEMIC ACQUIRED RESIS
; TITLE OF INVENTION: IN PLANTS
```


NUMBER OF SEQUENCES: 17
CORRESPONDENCE ADDRESS:
ADDRESSEE: No. US20002015249Aaltis Corporation
STREET: 520 White Plains Road, P.O. Box 2005
CITY: Tarrytown
STATE: New York
COUNTRY: USA
ZIP: 10591
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/079,035
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/577,799
FILING DATE:
APPLICATION NUMBER: 08/880,179
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Meigs, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: CGC 1909
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919) 541-8587
TELEFAX: (919) 541-8689
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 593 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-10-079-035-3

Query Match 43.2%; Score 1276; DB 14; Length 593;
Best Local Similarity 47.2%; Pred. No. 8.7e-109;
Matches 273; Conservative 113; Mismatches 165; Indels 28; Gaps 9;
QY 5 TSHVNFAPSDSASVEEGDADADVEALRLSDNLAARSPEDFAFLADARIAVPGG 64
DB 17 TSFVATDNTDSSIVYLAEEQVLTPDVSALQLLSNFSFVDPDPD--FYDAKLVL--- 71
QY 65 GGGGDLVRHCVLGARSPFLRGVFAARRAAAAGGGEDGSRLEIRLLGGGSEVEVG 124
DB 72 -SDGREVSPHRCVLSARSFFKSALA--AAKKEKDSNNTAAVKLEKEI---AKDYEVG 124
QY 125 YEALRLVLDLYSGRVDLPKACLCVDEDCAHVCHPAVAFMAOVLFAASTFQVAELTN 184
DB 125 FDSVTVTLAYVSSVRPPKGVSECADENCCHVACRPADVFMLEVLYLAFFIKPELIT 184
QY 185 LFQRLLDVLDKVEVDNLLILSVANLCNCKSKLLERCLDMVRSNLDMLTLEKSLPDD 244
DB 185 LVQRHLDDVVDKVIETDILVILKLANICGKACMLDKCKEIIKVSNDVMSLESLPEE 244
QY 245 VIKQIIDARLSGLSPENKGPKNKHRIHRAALSDVDVELVRMLLTGQTNLDFAFLH 304
DB 245 LVKEIIDRRKELGVKPKV---KHVSNVHRAKALSDDIELVKLLKEDHTNLDACALH 300
QY 305 YAVEHCDSKITTELDLADLVNHNPRGYTVLHAAARRRPEKIIVSLITKGAADVTFF 364
DB 301 FAVAYCNKTAEDLLKLDLADLVNHNPRGYTVLHVAARKPEQLILSLLEKASASEATL 360
QY 365 DGRKAVQISKRITKQDYGVTGTEGPKPKDRLCIEILEQARRRPPQGEASVSLAMAGE 424
DB 361 EGR TALMIKQATMAVECNNIPEQCKHSUKGLCVLELLEQEDKRSQIRDPVPPFAVAAD 420
QY 425 SURGRLLYENVALARIMFMEARVAMDAIOVDGTLFNLGSGANPPPP-----QRTTV 480
DB 421 ELKMTLLDENVALAQRLLFPTTAQAAMEIAEMKGTCEFIVTS---LEPDRITGTKRTSP 477

QY 481 DLNESPFTMKEEHLARMTALSKTVELGKRPFRCSNVLDKIMD-DETPVSLGRDTSAEK 539
DB 478 GVKIAPFRILEEHQSRKALKSKTVELGKRPFRCSAVLDQIMNCEDLTQLACGEDDTAEK 537
QY 540 R-----KRFDHLDQVLQKAFHEDKEENDRSGLSLSSSSSTS 574
DB 538 RLQKKQRYMEIQETLKKAFFSEDNLELGNLSLTDTSSTS 576
RESULT 13
US-10-328-675A-6
; Sequence 6, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: 30857USNPDIV1
; CURRENT APPLICATION NUMBER: US/10/328,675A
; CURRENT FILING DATE: 2002-12-23
; PRIOR APPLICATION NUMBER: 09/519,232
; PRIOR FILING DATE: 2000-03-06
; PRIOR APPLICATION NUMBER: 60/219,338
; PRIOR FILING DATE: 1999-03-09
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 6
; LENGTH: 579
; TYPE: PRT
; ORGANISM: Brassica napus
; FEATURE:
; NAME/KEY: Misc_Feature
; LOCATION: (6)...(6)
; OTHER INFORMATION: Xaa is either Gly or Arg
; FEATURE:
; NAME/KEY: Misc_Feature
; LOCATION: (19)...(19)
; OTHER INFORMATION: Xaa is either Leu or Pro
; FEATURE:
; NAME/KEY: Misc_Feature
; LOCATION: (34)...(34)
; OTHER INFORMATION: Xaa is either Tyr or Phe
; FEATURE:
; NAME/KEY: Misc_Feature
; LOCATION: (39)...(39)
; OTHER INFORMATION: Xaa is either Phe or Leu
; FEATURE:
; NAME/KEY: Misc_Feature
; LOCATION: (97)...(97)
; OTHER INFORMATION: Xaa is either Ala or Thr
; FEATURE:
; NAME/KEY: Misc_Feature
; LOCATION: (151)...(151)
; OTHER INFORMATION: Xaa is either Glu or Asp
; FEATURE:
; NAME/KEY: Misc_Feature
; LOCATION: (196)...(196)
; OTHER INFORMATION: Xaa is either Asn or Ile
; FEATURE:
; NAME/KEY: Misc_Feature
; LOCATION: (242)...(242)
; OTHER INFORMATION: Xaa is either Asp or Asn
; US-10-328-675A-6
Query Match 41.4%; Score 1222.5; DB 12; Length 579;
Best Local Similarity 45.9%; Pred. No. 7.2e-104;
Matches 260; Conservative 110; Mismatches 160; Indels 37; Gaps 10;
QY 14 DSDASVEEGDADADVEALRLSDNLAARSPEDFAFLADARIAVPGGGGGGDLRV 73
DB 27 NGSSTVXPTXLTXPVSAFQLLNSLESVDFDSE--AFYSDAKLVL---SDDKEYSF 80


```
QY 74 HRCVLSARSFPLRGVFAARRAAAAGGGEDGSRLELRELLGGGEEVEGYEALRLVLD 133
DB 81 HRCVLSARS-----AFFKAALXAAEKVQKSTPVKLELKT-----AAEYDVGDFSVVAVLA 131
QY 134 YLSGRVGDLPKAAACLVDEDCAHVGCCHPAVAFMAQVLAFAASTFOVAELTNLFORLLDV 193
DB 132 YVSGRVPPPKGVSECDXSCCHVACRPADVFMVEVLYLAFVFOIQELVTMYQRHLLDV 191
QY 194 LDKVEVDNLLILSVANICNCKMCLRLERCLDMVVRSLDMITLKSPPDPVVIQIIDAR 253
DB 192 VDKVXIEDTLVVLKLANICGKACKLFDKCRBIIVKSNDVVVTLKKSLPEXIAKQVIDIR 251
QY 254 LSLGLSPENKGFPMKXVRRHRLDSDDELVELVRLMTEGQTNLDDAFALHYAVEHCDCK 313
DB 252 KELGLEVAE-----PEKHVSNTHKALESDDLDLVMLLKEGHTNLDDEYALHFAVAYCDEK 307
QY 314 ITTELDDALADVNRHNRPRGYTVLHIAARRRREPKIIVSLITKGARPAADVTFDGRKAVOIS 373
DB 308 TARNLELGFADVNRHNRPRGYTVIHVAAMRKEPTLIALULLTKGNALEMSLDGRTALLIA 367
QY 374 KRLTKQDYGVTGTEGKSPDRLCIEILEQAE--RDPOLGASVSLAMAGESLRGRLLY 432
DB 368 KOVTKAABCC--ILEKGKLAAGGVCEILKQDNTREPPFEDVSPSLAADAQFKIRLID 426
QY 433 LENRVALARIMFPMARVAMDIQVDTGLEFNLGSGANPPPERQRTTVOLNESPFIMKEE 492
DB 427 LENRQVAMARCXYPMQAQVAMDFARMKGTREFVV-----TTATDLHMEPPKFFVEM 475
QY 493 HLARMTALSKTVELGKRPFRCSNVLDKIMDDE--TDPVSLGRDT---SAEKRRKRFHDLQ 547
DB 476 HQSLTALSKTVFEGKRPFRCSKVLDDIVDSEDITILALVEEDTPEQRQKRQRFMEIQ 535
QY 548 DVLQKAFHEDKEENDRSLSSSSSSSTS 574
DB 536 BIVQMAFSKXEDLGKSLSSSSSTS 562
```

RESULT 14

```
US-10-328-675A-20
; Sequence 20, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weisio, Laura
; APPLICANT: Willits, Michael
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: 30857USNPDI1
; CURRENT APPLICATION NUMBER: US/10/328, 675A
; CURRENT FILING DATE: 2002-12-23
; PRIOR APPLICATION NUMBER: 09/519, 232
; PRIOR FILING DATE: 2000-03-06
; PRIOR APPLICATION NUMBER: 60/219, 338
; PRIOR FILING DATE: 1999-03-09
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 20
; LENGTH: 600
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
US-10-328-675A-20
```

Query Match 41.1%; Score 1213.5; DB 12; Length 600;
Best Local Similarity 45.8%; Pred. No. 5.2e-103;
Matches 277; Conservative 105; Mismatches 172; Indels 51; Gaps 17;

```
QY 1 MEPTSHVTNFAFSDSASVEGD-----ADADAD-----VEALRRSLDNLAAAPR 46
DB 1 MATTTTTTARFSDSYFNTSGNSFFAAESSLDYPTFTPEVSALKLNSLCSYVD 60
QY 47 SPEDFAFLADARIAVPGGGGGGDLVRHRCVLSARSFPLRGVFAARRAAAAGGGEDGSE 106
DB 61 SPE--TFYSDAKLVL-----AGGREVSFRCILSARIP-----VF-KSALATVKEQKSTTV 109
```

```
QY 107 RLEIRELLGGGEEVEGYEALRLVLDVLYSGRVGDLPKAAACLVDEDCAHVGCCHPAVAF 166
DB 110 KQLQKEI-----ARDEYEVGDFSVAVLAYVYSGRVSPKPGASACVDDCCCHVACKRSKVD 165
QY 167 MAQVLAFAASTFOVAELTNLFORLLDVLDDKVEVDNLLILSVANICNCKMCLRLERCLDM 226
DB 166 MVEVLYLSFVFOIQELVTLYERQFLEIVDKVVVEDILVIFKLDLTLCGTTYKLLDRCIEI 225
QY 227 VVRSLDMITLKSPPDPVVIQIIDARLSGLISPENKGFPMKXVRRHRLDSDDELVELV 286
DB 226 IVKSDIELVSLSEKSLPQHIIPKQIIDIREALCLEPPKLE-----RHVKNYIKALDSDDELV 281
QY 287 RMLITEGQTNLDDAFALHYAVEHCDCKITTELDDALADVNRHNRPRGYTVLHIAARRREP 346
DB 282 KMLLEGTNLDDEYALHFAITAHCAVKTAYDLELELADVNLNRNPRGYTVLHVAAMRKEP 341
QY 347 KTIIVSLITKGARPAADVTFDGRKAVOISKRLTKQDYGVTGTEGKSPDRLCIEILEQAE 406
DB 342 KLIISLLMKGANIILDTLIDGRTALVIVKRLTKADDTSTEDGTPSLKGGCIEVLEH-E 400
QY 407 RRDPLQG--EASVSLAMAGESLRGRLLYLENRVALARIMFPMARVAMDIQVDTGLBFN 464
DB 401 QKLEYLSPIEASLSLPTPEELRMLLYENRVALARLLFPVETETVQGIKLBETCEFT 460
QY 465 LGSGANPPPE--RORTTVDLNESPFIMKEEHLARMTALSKTVELGKRPFRCSNVLDKIM 522
DB 461 -ASSLEPDHHTGEXRTSLDLNMAPFOIHEKHLRLALCKTVELGKRYFKRCS--LDHFM 517
QY 523 DDE--TDPVSLGRDT---SAEKRRKRFHDLQVOKAFHEDKEENDRSLSSSSSSSTSIGA 577
DB 518 DTEDLNHLASVEEDTPEKRLQKQRYMELQETLTKMTFTSEDKEE---CGKSTTPKPTS--A 572
QY 578 IRPRR 582
DB 573 VRSNR 577
```

RESULT 15

```
US-09-934-455-434
; Sequence 434, Application US/09934455
; Publication No. US20030121070A1
; GENERAL INFORMATION:
; APPLICANT: Creelman, Robert
; APPLICANT: Dubell, Arnold
; APPLICANT: Heard, Jacqueline
; APPLICANT: Jiang, Cai-Zhong
; APPLICANT: Keddie, James
; APPLICANT: Pilgrim, Marsha
; APPLICANT: Ratcliffe, Oliver
; APPLICANT: Reuber, Lynne
; APPLICANT: Riechmann, Jose Luis
; APPLICANT: Yu, Guo-Liang
; APPLICANT: Pineda, Omalra
; TITLE OF INVENTION: Genes for Modifying Plant Traits IV
; FILE REFERENCE: MBI-0025
; CURRENT APPLICATION NUMBER: US/09/934, 455
; CURRENT FILING DATE: 2001-08-22
; PRIOR APPLICATION NUMBER: 60/227439
; PRIOR FILING DATE: 2000-08-22
; PRIOR APPLICATION NUMBER: MBI-0022
; PRIOR FILING DATE: 2001-11-16
; PRIOR APPLICATION NUMBER: MBI-0023
; PRIOR FILING DATE: 2001-04-17
; NUMBER OF SEQ ID NOS: 516
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 434
; LENGTH: 601
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
US-09-934-455-434
```

Query Match 41.1%; Score 1213.5; DB 11; Length 601;

Best Local Similarity 45.8%; Pred. No. 5, 2e-103;
Matches 277; Conservative 105; Mismatches 172; Indels 51; Gaps 17;

QY	1	MEPTSHVNTAFSDSDSASVEGD-----ADADAD-----VEALRRISLDNIAAAR	46
Db	2	MATTTTTTARFSDSVFNTSGNSFFAAESSLDYPTBFLTPPEVSALKLLSNCLESVFD	61
QY	47	SPEDFAFLADARIAVPGGGGGDLRVHRCVLSARSPLRGVFAARRAAAAAGGGEDGSE	106
Db	62	SPE--TFYSDAKLVL-----AGGREVSFHRCLISARIP-----VF-KSALATVKEQKSSTTV	110
QY	107	RLELRLLGGGEEVEVGEALRLVLDLYSGRVGDLPKAACLCVDEDCAHVGHCPAVAF	166
Db	111	KLQLKEI-----ARDVEVGFDSVVAVLAVYSGRVSPKGSACVDDDCCHVACKSVDF	166
QY	167	MAQVLAFAASTFQVABLTNLFQRLLDLVDLKVEDNLLILSVANLCNKSCKMLERCIDM	226
Db	167	MVEVLVLSVFQIQELVTLVERQFLIIVDKVVVEDIIVIFKLDTLGCTTYKKLLDRCIEI	226
QY	227	VYRSNLDMITLEKSLPPDVIKQIIDARLSLGLISPENKGFPPNKHVYRIRHRALDSDDELIV	286
Db	227	IVKSDIELVSLKSLFQHFQIIDIREALCDEPPKLE----RHVKNYKALDSDDELIV	282
QY	287	RMLTGGQNLDDAFAHVAVHCDSKITTELLDALADVNRNPRGYTVLHIAARRREP	346
Db	283	KMLLECHTNLDEAYALHFAIAHCAVKAYDAYDLELELADVNLRNPRGYTVLHVAARKEP	342
QY	347	KIIVSLLTGARPADVTDFGRKAVQISKRLTKQDYFGVTBEGKSPKDRLCIEILEQAE	406
Db	343	KLIISLLMKGANILDTTLGRTALVIVKRLTKADYKTSTEDGTPSLKGLCIEVLEH-E	401
QY	407	RRDPQLG--EASVSLAMAGESLRGLLYLENVALARIMFPMPEARVAMDIAQVDCGLEFN	464
Db	402	QKLEYLSPIEASLSLPVTPEELRMLLYYENVALARLLFPVETETVQGIKLEETCEFT	461
QY	465	LGSGANPPPE--RQRTTVDLNESPFIMKEHLARMTALSKTVELGKRFPPRCNSVLDKIM	522
Db	462	-ASSLEPDHHEKETSILDNWAPQIHEKHLRSLRALKCTVELGKRYFKRCS--LDHFM	518
QY	523	DDE--TDPVSLGRDT--SAEKXKRFHDLQVLOKAFHEDKENDRSGLSSSSSSTSIGA	577
Db	519	DTEDLNHLASVEBDTPEKRLQKQRYMELQETIMKTFSDEKBE--CGKSSTPKPTS--A	573
QY	578	IRPRR	582
Db	574	VRSNR	578

Search completed: December 4, 2003, 19:26:20
Job time : 37 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: December 4, 2003, 19:16:14 ; Search time 21 Seconds
(without alignments)
1172.615 Million cell updates/sec

Title: US-09-294-539-4
Perfect score: 2952
Sequence: 1 MEPTSHVNAFSDSDASV.....RSLSSSSSTSGAIRPRR 582

Scoring table: BIOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 328717 seqs, 42310858 residues

Total number of hits satisfying chosen parameters: 328717

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA.*

- 1: /cgn2_6/ptodata/1/iaa/5A_COMB.pap:*
- 2: /cgn2_6/ptodata/1/iaa/5B_COMB.pap:*
- 3: /cgn2_6/ptodata/1/iaa/6A_COMB.pap:*
- 4: /cgn2_6/ptodata/1/iaa/6B_COMB.pap:*
- 5: /cgn2_6/ptodata/1/iaa/PTUS_COMB.pap:*
- 6: /cgn2_6/ptodata/1/iaa/backfiles1.pap:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1737	58.8	576	4	US-09-519-232-4
2	1672.5	56.7	588	4	US-09-519-232-2
3	1629	55.2	604	4	US-09-519-232-64
4	1276	43.2	593	2	US-08-989-478-2
5	1276	43.2	593	3	US-08-996-685-2
6	1276	43.2	593	3	US-08-880-179-3
7	1270	43.0	593	2	US-08-989-478-8
8	1270	43.0	593	3	US-08-996-685-8
9	1222.5	41.4	579	4	US-09-519-232-6
10	1213.5	41.1	600	4	US-09-519-232-20
11	1213.5	41.1	601	4	US-09-519-232-72
12	1188.5	40.3	521	2	US-08-989-478-12
13	1188.5	40.3	521	3	US-08-996-685-12
14	1134	38.4	469	2	US-08-989-478-10
15	1134	38.4	469	3	US-08-996-685-10
16	1087	36.8	621	4	US-09-551-778-2
17	1087	36.8	621	4	US-09-551-778-4
18	1060.5	35.9	591	4	US-09-519-232-66
19	1052.5	35.7	397	2	US-08-989-478-14
20	1052.5	35.7	397	3	US-08-996-685-14
21	1045.5	35.4	609	4	US-09-569-804-11
22	1045	35.4	607	4	US-09-569-804-10
23	1031	34.9	586	4	US-09-519-232-70
24	1009	34.2	574	4	US-09-519-232-8
25	995	33.7	475	4	US-09-569-804-4
26	971.5	32.9	601	4	US-09-519-232-18
27	844.5	28.6	409	4	US-09-569-804-21

28	825	27.9	217	4	US-09-519-232-46	Sequence 46, Appl
29	823	27.9	219	4	US-09-519-232-30	Sequence 30, Appl
30	782.5	26.5	381	4	US-09-569-804-17	Sequence 17, Appl
31	751	25.4	261	2	US-08-989-478-16	Sequence 16, Appl
32	751	25.4	261	3	US-08-996-685-16	Sequence 16, Appl
33	678	23.0	369	4	US-09-519-232-74	Sequence 74, Appl
34	644	21.8	165	4	US-09-519-232-38	Sequence 38, Appl
35	614	20.8	165	4	US-09-519-232-40	Sequence 40, Appl
36	599	20.3	165	4	US-09-519-232-42	Sequence 42, Appl
37	502.5	17.0	180	4	US-09-569-804-35	Sequence 35, Appl
38	493	16.7	165	4	US-09-519-232-58	Sequence 58, Appl
39	485	16.4	165	4	US-09-519-232-32	Sequence 32, Appl
40	477	16.2	165	4	US-09-519-232-34	Sequence 34, Appl
41	470	15.9	165	4	US-09-519-232-48	Sequence 48, Appl
42	461.5	15.6	158	4	US-09-519-232-50	Sequence 50, Appl
43	450	15.2	165	4	US-09-519-232-44	Sequence 44, Appl
44	441	14.9	165	4	US-09-519-232-56	Sequence 56, Appl
45	425.5	14.4	166	4	US-09-519-232-54	Sequence 54, Appl

ALIGNMENTS

RESULT 1
US-09-519-232-4
; Sequence 4, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weiolo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Testaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RT2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patent in Ver. 2.1
; SEQ ID NO 4
; LENGTH: 576
; TYPE: PRT
; ORGANISM: Lycopersicon esculentum
US-09-519-232-4

Query Match	58.8%	Score 1737;	DB 4;	Length 576;
Best Local Similarity	59.9%	Pred. No. 1.6e-168;		
Matches	349;	Conservative	94;	Mismatches 108;
				Indels 32; Gaps 8;
Qy	11	AFSDSDSAS-----VEGDADADADAEALRRLSDNLAAAF-RSPEDFAFLADARIAVP	62	
Db	6	AFSDNDISGSSSICCMNESETSL-ADVNSLKRLETLESIFDASAPDFDFADAKLLAP	64	
Qy	63	GGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGDSERLEURELLGGGGEVE	122	
Db	65	-----GGKEIPVHRCILSARSPFFKNVFC-----GKDSSTKLEKLELM-----KEYE	106	
Qy	123	VGYEALRLVLDLYSGRVGDLPKAACLCVDBDCAHVGCHPAVAFMAQVLFPAASTFQVAEL	182	
Db	107	VSPDAVSVLAYLYSGKVPASKDCVCDNECLHVACRPVAFMVQVLYASFQISQL	166	
Qy	183	TNLFQRLLDVLDKVEVDNLLILSVANLCKNSCKLLERCLDMVVRNLMITLEKSLP	242	
Db	167	VDFQRHLDDLDKAVADDMMVLISVANICGKACERLLSRICIDIIVKSNVDIITLDSKL	226	
Qy	243	PDVTKQIIDARLSGLISPEKNGFPHKVRIRHIALDSDDVLRMLLTETGOTNLDDAFA	302	
Db	227	HDIYKQITDSRAELGLOGPESNGPDKHVKHIALDSDDVLRMLLKEGHTTLDDAYA	286	
Qy	303	LHYAVEHCDSKITTELLDALADVYNHNRNPRGYTVLHIAARRRREPKEIIVSLITKCARPADV	362	
Db	287	LHYAVAYCDATKTELLDLSLADVNHQNPGRHTVLHVAAMKEPKIIVSLITKCARPSDL	346	
Qy	363	TFDGRKAVQISKRLTKQGDYFGVTEGKPSKPKRLCIEILLEQABRRDQPLGEASVSLAMA	422	

Db 347 TSDGKALQIAKRLTRLVDTTKSTEGKSAPKDRICIEILQOERDPLLGESASLAMA 406
Qy 423 GESLRGLLYENRVALARIMFWEARVAMDIQAQDGTLEFNIGSGANPPPERQRTVDL 482
Db 407 GDLRMKLLYLENRVGLAKLLFPMEAKVAMDIQAQDGTSELPASMKKIADQRTVDL 466
Qy 483 NESPFIMKEEHLARMALSKTVELGKRFPPRCNSVLDKIM--DDETDPVSLGRTSAB-- 538
Db 467 NEAPFKMEKEHLNRALSRVTELGRFFPRCSVNLKIMDADDLSEIAYMGNDTVEERQ 526
Qy 539 -KRKRPHDLQDVLOKAFHEDKEENDRSGLSSSSSTSGAIRP 580
Db 527 LKQRYMELQELSKAFTEDEKBEFATNMSSSCSTSGKGVDPK 569

RESULT 2

US-09-519-232-2
; Sequence 2, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 2
; TYPE: PRT
; ORGANISM: Nicotiana tabacum
US-09-519-232-2

Query Match 56.7%; Score 1672.5; DB 4; Length 588;
Best Local Similarity 56.8%; Pred. No. 6.6e-162; Indels 35; Gaps 8;
Matches 336; Conservative 102; Mismatches 119; Indels 35; Gaps 8;
Qy 11 AFSDSASVEE-----GDADADADVEALRLRLSDNLAFAAF-RSPEDFAFLAD 56
Db 7 AFSDSNDISGSSSICIGGMMTEFFSPETSPAEITSLKRLSETLESIFDASLPEFDYAD 66
Qy 57 ARIAVPGGGGGDLRVHRCVLSARSPPFLRGVFAARRAAAGGGGDSERLELBELGG 116
Db 67 AKLVV---SGPCKEIPVHRHILSARSPPFNLFUFC-----GKKEKNSKVELKEVM-- 113
Qy 117 GGEVEVGYEALRLVLDLYSGRVGDLPKAACLCVDEDCAHVGHCPAVAFNAQVLFPAAST 176
Db 114 --KEHEVSYDAVMSVLAYLSKVRPSKDVCCVNDNCSHVACRPVAFVLEVLYTSFT 171
Qy 177 FOVAELTNLFQRLLDVLDKVEVDNLLILSVANLCKNSCKMLERCLDMVVRNLDMIT 236
Db 172 FOISELVDFORHLLDILDKTAADVMVLSVANI--CGRACERLLSSCIEIIVKSNVDIT 231
Qy 237 LEKSLPPDPVVKIIDARLSGLISPENKGFNKHVRTHRALDSDDVELVWMLTTEGOTN 296
Db 232 LDKALPHIVKQITUSRAELGQGGESNGFPDGKVRTHRALDSDDVELVWMLTTEGHT 291
Qy 297 LDDAFALHYAVECHDSKITTLELDLADLVNHRNPRGYTVLHIAARRREPKEIIVSLTKG 356
Db 292 LDDAFALHYAVAYCAKTAETLLELDLADLVNHRNPRGYTVLHIAARRREPKEIIVSLTKG 351
Qy 357 ARPADVTGKAVQISKRLTKQGYFGVTEGKPSKDRICIEILQOERDPLLGAS 416
Db 352 ARPSDLTSDGRKALQIAKRLTLVDFSKSPGEGKASNDRLCIEILQOERDPLLGAS 411
Qy 417 VSLMAGESLRLGLLYENRVALARIMFWEARVAMDIQAQDGTLEFNIGSGANPPPERQ 476
Db 412 VSLMAGDGLRLKLLYLENRVGLAKLLFPMEAKVAMDIQAQDGTSEFFPLSIGKMANAQ 471

Qy 477 RTVDLINESPFIKKEEHLARMALSKTVELGKRFPPRCNSVLDKIM--DDETDPVSLGRD 534
Db 472 RTVDLNEAPFKKEEHLNRALSRVTELGRFFPRCSVNLKIMDADDLSEIAYMGND 531
Qy 535 TSAB--KRKRPHDLQDVLOKAFHEDKEENDR-SGLSSSSSTSGAIRP 582
Db 532 TAERQLKQRYMELQELTKAFTEDEKBEYDKTNWISSSCSTSGKGVDPK 583
RESULT 3
US-09-519-232-64
; Sequence 64, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTP2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 64
; LENGTH: 604
; TYPE: PRT
; ORGANISM: Beta vulgaris
US-09-519-232-64

Query Match 55.2%; Score 1629; DB 4; Length 604;
Best Local Similarity 57.4%; Pred. No. 1.9e-157; Indels 44; Gaps 10;
Matches 343; Conservative 81; Mismatches 130; Indels 44; Gaps 10;
Qy 11 AFSDSASAS-----VEEGDADADVEALRLRLSDNLAFAAF---SPED 50
Db 15 AFSDSNDISGSSSICCVAAATTTTAAENSLSTFPDAAALLRLSENLSLFPQSLSLSD 74
Qy 51 PAFIADARIAPVGGGGGDLRVHRCVLSARSPPFLRGVFAARRAAAGGGGDSER--- 107
Db 75 SDSFADAKIVV---SGDSREVAVHRCVLSRSSGFFRSFAFASAKREKEK---ERDKERVVK 127
Qy 108 LELRELLGGGEEVEVGYEALRLVLDLYSGRVGDLPKAACLCVDEDCAHVGHCPAVAFM 167
Db 128 LELKDLAG---DPEVGFDSVAVGLYSGKVRNLPRGICVCDVEDCSHEACRPADVDF 183
Qy 168 AQVLFPAASTFQVAELTNLFQRLLDVLDKVEVDNLLILSVANLCKNSCKMLERCLDMV 227
Db 184 VEVLVLSHKEFEIVELVSLYQRHLLDILDKIAPDDVLVLSVAEMCGNACDGLLARCIDI 243
Qy 228 VRSNLDMITLEKSLPPDPVVKIIDARLSGLISPENKGFNKHVRTHRALDSDDVELVR 287
Db 244 VRSDIDVTIDKSLPQNVVKQIITDKELGFTBFGVVEFPDKHVKTHRALESDDVELVR 303
Qy 288 MLTTEGOTNLDLAFALHYAVECHDSKITTLELDLADLVNHRNPRGYTVLHIAARRREP 347
Db 304 MLKERTHTLDDAFALHYAVAHCAKTTTLELGLADLVNLRNLRGHTVLHVAAMRKEPK 363
Qy 348 IIVSLLTGKARPADVTGKAVQISKRLTKQGYFGVTEGKPSKDRICIEILQOER 407
Db 364 IIVSLLTGKARPSDITSDKKALQIAKRLTKAVDFYKTTTQGGKADPKDRICIEILQOER 423
Qy 408 RDPOLGEASVSLMAGESLRLGLLYENRVALARIMFWEARVAMDIQAQDGTLEFNIGS 467
Db 424 REPLLGGVSLAKAGDGLRLKLLYLENRVGLAKLLFPMEAKVAMDIQAQDGTSEFFLSK 483
Qy 468 GANPPPERQRTTVLDLINESPFIKKEEHLARMALSKTVELGKRFPPRCNSVLDKIM--DE 525
Db 484 NI--ADARNVADLNEAPFLKEEHLQMKALSKTVELGKRFPPRCSDVNLKIMDAEDL 540
Qy 526 TDPVSLGRDTSAB---KRKRPHDLQDVLOKAFHEDKEENDRSGLSSSSSTSGAIRP 580
Db 541 SQLAFLGKOTPEERQKRKRKRYLELOALTKAFTEDEKKEEFDRLSSSSSTSG---RP 596

;; PRIOR APPLICATION DATA: US 60/034,379
;; APPLICATION NUMBER: US 60/034,379
;; FILING DATE: 27-DEC-1996
;; PRIOR APPLICATION DATA: US 60/034,382
;; APPLICATION NUMBER: US 60/034,382
;; FILING DATE: 27-DEC-1996
;; PRIOR APPLICATION DATA: US 60/034,730
;; APPLICATION NUMBER: US 60/034,730
;; FILING DATE: 10-JAN-1997
;; PRIOR APPLICATION DATA: US 60/035,021
;; APPLICATION NUMBER: US 60/035,021
;; FILING DATE: 10-JAN-1997
;; PRIOR APPLICATION DATA: US 60/035,022
;; APPLICATION NUMBER: US 60/035,022
;; FILING DATE: 10-JAN-1997
;; PRIOR APPLICATION DATA: US 08/875,015
;; APPLICATION NUMBER: US 08/875,015
;; FILING DATE: 16-JUL-1997
;; ATTORNEY/AGENT INFORMATION:
;; NAME: Meigs, J. Timothy
;; REGISTRATION NUMBER: 38,241
;; REFERENCE/DOCKET NUMBER: PF/5-21215/P1/CGC1912
;; TELECOMMUNICATION INFORMATION:
;; TELEPHONE: (919) 541-8587
;; TELEFAX: (919) 541-8689
;; INFORMATION FOR SEQ ID NO: 2:
;; SEQUENCE CHARACTERISTICS:
;; LENGTH: 593 amino acids
;; TYPE: amino acid
;; TOPOLOGY: linear
;; MOLECULE TYPE: protein
;; US-08-996-685-2

Query Match 43.2%; Score 1276; DB 3; Length 593;
Best Local Similarity 47.2%; Pred. No. 2.2e-121;
Matches 273; Conservative 113; Mismatches 165; Indels 28; Gaps 9;

QY 5 TSHVTNFAFSDSASVEEGDADADVEALRRLSDNLAARSPEDFAFLADARIAVPGG 64
DB 17 TSFVATDNTDSSIVYLAEEQVLTGPDVSAQLLSNSFESVDFSPDD--FYSDAKLVL--- 71

QY 65 GGGGDLRVHRCVLSARSFPLRGVFARRAAAAGGGEDGSRLELRLLGGGEEVEVG 124
DB 72 -SDGREVSFHRVLSARSFFKSALA--AAKKEKDSNNTAAVKLEKEI---AKDYEVG 124

QY 125 YEALRLVLDYLSGRVGDLPKAAACLCVDEDCAHVGHCPAVAFMAOVLFAASTFOVAELTN 184
DB 125 FDSVTVLAYVYSRVRPPPKGVSECADENCCCHVACRPVDFMFLVLYLAFIKPELIT 184

QY 245 VIKQIIDARLSLGLSPENKGFPHRIHALDSDVDVLRMLLTGQNTLDDAFALH 304
DB 245 LVKEIIDRRKELGLEVPVKV-----KHVSNVHKALSDSDIELVKLLKEDHTLNDACALH 300

QY 305 YAVEHCDSKITTELLDADLVNHNPRGYTVLHIAARRRPPKIIVSLTLTKGARPADVTF 364
DB 301 FAVACNVKTATDLKLDADVHNHNRPGYTVLVHAAKRPQILSLLEKGAASEATL 360

QY 365 DGRKAVQISKRLTKGDYFGVTEEGKSPKORLCIEIIEQAERRDPQIGEASVSLAMAGE 424
DB 361 EGRALMAIKOATWAVECNIPEQCKHSLKGRCLVLEIQEDBKREIQIPRDVPPSPFAVAAD 420

QY 425 SLRGLLYLNRVALRTWFMPEARVAMDIAQVDTGLEFNLSGANPPPER-----QRTTV 480
DB 421 ELKMTLLDLNRLVALQRLFPTEAQAAMEIAEMKGTCEFI VTS---LEPDLRTGTGRTSP 477

QY 481 PINESPFIMKBEHLARMTALSKTVLGRKFRFPFRCSNVLDKIMD-DETPDPSLGRDTSAEK 539

Db 478 GVKIAPFRILEHQSRLKALSKTVLGRKFRFPFRCSAVLDQIMNCDLTQLACGEDDTAKK 537

QY 540 R----KRFHDLQDVLQKAFHEDKENDRSGLSSSSSSSTS 574
Db 538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDTSTSSTS 576

RESULT 6
US-08-880-179-3
; Sequence 3, Application US/08880179
; Patent No. 6091004
; GENERAL INFORMATION:
; APPLICANT: Ryals, John
; APPLICANT: Delaney, Terry
; APPLICANT: Friedrich, Leslie
; APPLICANT: Weymann, Kristianna
; APPLICANT: Lawton, Kay
; APPLICANT: Ellis, Daniel
; APPLICANT: Uknes, Scott
; APPLICANT: Jesse, Taco
; APPLICANT: Vos, Pieter
; TITLE OF INVENTION: GENE ENCODING A PROTEIN INVOLVED IN THE
; TITLE OF INVENTION: SIGNAL TRANSDUCTION CASCADE LEADING TO SYSTEMIC ACQUIRED RESIS
; TITLE OF INVENTION: IN PLANTS
; NUMBER OF SEQUENCES: 17
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: No. 6091004artis Corporation
; STREET: 520 White Plains Road, P.O. Box 2005
; CITY: Tarrytown
; STATE: New York
; COUNTRY: USA
; ZIP: 10591
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/880,179
; FILING DATE:
; CLASSIFICATION: 800
; ATTORNEY/AGENT INFORMATION:
; NAME: Meigs, J. Timothy
; REGISTRATION NUMBER: 38,241
; REFERENCE/DOCKET NUMBER: CGC 1909
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (919) 541-8587
; TELEFAX: (919) 541-8689
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 593 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-880-179-3

Query Match 43.2%; Score 1276; DB 3; Length 593;
Best Local Similarity 47.2%; Pred. No. 2.2e-121;
Matches 273; Conservative 113; Mismatches 165; Indels 28; Gaps 9;

QY 5 TSHVTNFAFSDSASVEEGDADADVEALRRLSDNLAARSPEDFAFLADARIAVPGG 64
DB 17 TSFVATDNTDSSIVYLAEEQVLTGPDVSAQLLSNSFESVDFSPDD--FYSDAKLVL--- 71

QY 65 GGGGDLRVHRCVLSARSFPLRGVFARRAAAAGGGEDGSRLELRLLGGGEEVEVG 124
DB 72 -SDGREVSFHRVLSARSFFKSALA--AAKKEKDSNNTAAVKLEKEI---AKDYEVG 124

QY 125 YEALRLVLDYLSGRVGDLPKAAACLCVDEDCAHVGHCPAVAFMAOVLFAASTFOVAELTN 184
DB 125 FDSVTVLAYVYSRVRPPPKGVSECADENCCCHVACRPVDFMFLVLYLAFIKPELIT 184

185	QY	LFQRRLDVLVDKVEVDNLLLLTILSVANLCKNCKMCLLERCLDMWVRSNLDMTLEKSLPDD	244
186		LYORHLLDVLVDKVVIEDTFLVILKLANICGKACMKLLDCKEIIKVSNDVMSLEKSLPEE	244
245	QY	VIKQIIDARLSGLISIPENKGFPPKHHVRIIRALSDSDVELVRMLLTGQTNLDDAFALH	304
246		LVXIEIIDRRKELGLEVPVKV-----KHVSNVHKALSDSDIELVKLLLKEDHNLDDACALH	300
305	QY	YAVEHCDKSKITTELLDLALADVNHRNPRGYTVLHIAARRRPKIIVSLTTKGARPADVTF	364
306		FAVAYCNVKATDILLDLADVNHRNPRGYTVLHVAAMRKSPQLLSLLEKGASASEATL	360
365	QY	DGRKAVOISKRLTKQGYFGVTEGSKSPKDRLCIEILEQAERDDPQIGEASVSLAMAGE	424
366		EGRTALMIAKQATWAVECENNIPQCKSHLKGRLCVELIEQEDKREQIIPRDVPPSPFAAAD	420
425	QY	SLGRLLYLENRVALARIMFPMPEARVAMDIAQVDTGLENLGSGANPPPER-----QRITV	480
426		ELKWTLDLENRVALQARLFPTEAQAAAEIAMEKGTCEFI VTS-----LEPDRLTGTGKRSP	477
481	QY	DLNESPPIMKEEHLARMTALSKTVELGKRFPPRCNSVNLDKIMD-DETPDVSJLGRDTSAEK	539
482		GVKIAPRILIEEHOSRLKALSCTVELGKRFPPRCNSAVLDQIMNCEDLTQLACGEDDTAEK	537
540	QY	R-----KRFHDLQDVLOKAFHEDKSENDRSGLSGSSSSSTS	574
538	Db	RLOKKORYMIEQTEFLTKKAFSDNLIELGNSLTDTSSTS	576

RESULT 7

```

US-08-989-478-8
: Sequence 8, Application US/08989478
: Patent No. 5986082
: GENERAL INFORMATION:
: APPLICANT: Uknes, Scott
: APPLICANT: Hunt, Michelle
: APPLICANT: Steiner, Henry-York
: APPLICANT: Ryals, John
: TITLE OF INVENTION: ALTERED FORMS OF THE NIM1 GENE CONFERRING
: TITLE OF INVENTION: DISEASE RESISTANCE IN PLANTS
: NUMBER OF SEQUENCES: 32
: CORRESPONDENCE ADDRESS:
: ADDRESSEE: No. 5986082artis Corporation
: STREET: 3054 Cornwallis Road
: CITY: Research Triangle Park
: STATE: No. 5986082th Carolina
: COUNTRY: USA
: ZIP: 27709
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Floppy disk
: COMPUTER: IBM PC compatible
: OPERATING SYSTEM: PC-DOS/MS-DOS
: SOFTWARE: PatentIn Release #1.0, Version #1.30
: CURRENT APPLICATION DATA:
: FILING DATE: US/08/989,478
: CLASSIFICATION:
: PRIORITY APPLICATION DATA:
: APPLICATION NUMBER: US 60/033,177
: FILING DATE: 13-DEC-1996
: PRIORITY APPLICATION DATA:
: APPLICATION NUMBER: US 60/034,379
: FILING DATE: 27-DEC-1996
: PRIORITY APPLICATION DATA:
: APPLICATION NUMBER: US 60/034,382
: FILING DATE: 27-DEC-1996
: PRIORITY APPLICATION DATA:
: APPLICATION NUMBER: US 60/034,730
: FILING DATE: 10-JAN-1997
: PRIORITY APPLICATION DATA:
: APPLICATION NUMBER: US 60/035,021
: FILING DATE: 10-JAN-1997
: PRIORITY APPLICATION DATA:

```


APPLICANT: Kung, Ruth
APPLICANT: Kessmann, Helmut
APPLICANT: Oostendorp, Michael
TITLE OF INVENTION: METHOD FOR PROTECTING PLANTS
NUMBER OF SEQUENCES: 32
CORRESPONDENCE ADDRESS:
ADDRESSEE: No. 6031153artis Corporation
STREET: 3054 Cornwallis Road
CITY: Research Triangle Park
STATE: No. 6031153th Carolina
COUNTRY: USA
ZIP: 27709
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/996,685
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/761,543
FILING DATE: 6-DEC-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/034,378
FILING DATE: 27-DEC-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/034,379
FILING DATE: 27-DEC-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/034,382
FILING DATE: 27-DEC-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/034,730
FILING DATE: 10-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/035,021
FILING DATE: 10-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/035,022
FILING DATE: 10-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/035,024
FILING DATE: 10-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/875,015
FILING DATE: 16-JUL-1997
ATTORNEY/AGENT INFORMATION:
NAME: Meigs, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: PF/5-21215/P1/CGC1912
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919) 541-8587
TELEFAX: (919) 541-8689
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 593 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-996-685-8

Query Match 43.0%; Score 1270; DB 3; Length 593;
Best Local Similarity 47.0%; Pred. No. 9e-121;
Matches 272; Conservative 113; Mismatches 166; Indels 28; Gaps 9;
QY 5 TSHVTFAPSDSDSASVEEGDADADVEALRLSDNLAAFRSPEDFAFLADARIAVPGG 64
DB 17 TSPVATNDTSSIVYLAARQVLTGPDVSALQLLSNFEAVFAPDD--FYSDAKLVL--- 71
QY 65 GGGGGDLRHVRCVLSARSFPLRGVFAARRAAAGGGGDSERLERLGSGGEEVEVG 124

DB 72 -SDGREVSHRCVLSARSSFFKSALA--AAKKEKSDNNTAAVKLELKEI-----AKDYEVG 124
QY 125 YEALRLVLDLYISGRVGDLPKAAACLVDEDCAHVGHCHPAVAFMAQVLFAASTQVAVELTN 184
DB 125 FDSVVTVLAVYSSRVPPPKGVSECADENCCHVACRPVDFMLEVLYLAFIKPELIT 184
QY 185 LFORRLDLDVKVEVDNLLILSVANLCKNSCKMLLERCLDMVVRSLNLDMLTEKSLPPD 244
DB 185 LYQRHLLDQVVDKVVIEDTLVLKLANICGKACMKLLDRCKEIIIVKSNVDMVSLKSLPEE 244
QY 245 VIKQIIDARLSGLISIPENKGFNKHVRRIRHRALDSDDELVELVRMLLTEGOTNLDAPALH 304
DB 245 LVKEIIDRRKELGLEVPKVK---KHSNVHKALDSDDIELVKLLKEDHTNLDACALH 300
QY 305 YAVEHCDSKITTELLDLALADVNRHPRGTVLHIAARRREPKEIIVSLLTGKARPADVTF 364
DB 301 FAVAYCNVKTATDLKLDLADVNRHPRGTVLHIAARRREPKEIIVSLLTGKASASATL 360
QY 365 DGRKAVOISKRLTKQGDYFCVTEEGKPSKDRICIEILEQAERRDPOLGSEASVSLAMAGE 424
DB 361 EGRALMIAKOATWAVECNIPQCKHSLKGRCLVEILEQEDKREIQIPRDVPSFAVAAD 420
QY 425 SLRRLYLENRVALARIMPFMEARVAMDIAQVDGTLFNLGSGANPPPER---QRTTV 480
DB 421 ELKMTLLDLENVALAQRLLPTEAQAAMEIAEMKGTCEFTVTS---LEPDLRTGKRTSP 477
QY 481 DLNESPFIMKEEHLARMTALSKTVELGKRFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
DB 478 GVKIAPFRILEEHQSRKLSKTVELGKRFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 537
QY 540 R---KRFHDLQVLOKAPHEDKEENDRSGLSLSSSSSSS 574
DB 538 RLQKKQRYMEIQETLKAFSEDNLELGNLSLTDSTSTS 576

RESULT 9
US-09-519-232-6
; Sequence 6, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTP2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 6
; LENGTH: 579
; TYPE: PRT
; ORGANISM: Brassica napus
US-09-519-232-6

Query Match 41.4%; Score 1222.5; DB 4; Length 579;
Best Local Similarity 45.9%; Pred. No. 6.2e-116;
Matches 260; Conservative 110; Mismatches 160; Indels 37; Gaps 10;
QY 14 DSDSASVEEGDADADVEALRLSDNLAAFRSPEDFAFLADARIAVPGGGGGDLRV 73
DB 27 NSGSTVXPTLXTRPEVSFAFQLLSNLSVDFDSE--AFYSDAKLVL---SDDKEVSF 80
QY 74 HRCVLSARSFPLRGVFAARRAAAGGGGDSERLERLGSGGEEVEVGVEALRLVLD 133
DB 81 HRCVLSARS-----LFFKAALXAAEKVKSTPVLKLEKTL-----AAEVDVGFDSVAVLA 131
QY 134 YLXSGRVGDLPKAACLCVDEDCAHVGHCHPAVAFMAQVLFAASTQVAVELTNLFORRLD 193
DB 132 VYSGRVFPKPKGVSECADXSCCHVACRPVDFMLEVLYLAFVFOIQELVTMYQRHLDD 191
QY 194 LDKVEVDNLLILSVANLCKNSCKMLLERCLDMVVRSLNLDMLTEKSLPPDVIKOIIDAR 253

Db 192 VDKXIEDTLVVLKLANICGACKKLPKCBREIIIVKSNVDVVTLLKSLUPEXIAKOVIDIR 251
Qy 254 LSLGLISPENKGFPMKHVRRIRHALDSDDVELVRMLLTEGQTNLDDAFALHYAVEHCDSK 313
Db 252 KELGLEVAE---PEKHVSNIHKALESDDLDLVMLLKEGHTNLDEAYALHFAVAYCDEK 307
Qy 314 ITTELDDALADVNRHNRPGTVLHIAARRREPKLIIVSLTLKGARPADVTFDGRKAVOIS 373
Db 308 TARNLLELGFADVNRNRPGTVTHVAAMRKREPTLIALLLTKGANALEMSLDGRTALLIA 367
Qy 374 KRLTKQGDYFGVTBEGKPSKDRLCIEILEQAE---RDPOLGEASVSLAMAGESLRGLLY 432
Db 368 KQVTKAECC-ILEKGKLAAGVCVVELKQDNTREFPDVSPSLAADAQFKIRLID 426
Qy 433 LENRVALARIMFPEARVAMDIQVGDGLFNLGSGANPPPERQRTTVDLINESPFIKKEE 492
Db 427 LENRVQMARCLVPMEAOVAMPARMKGTREFV-----TTATDLHMEPPKFFVEM 475
Qy 493 HLAHRTALSKTVELGKRFPPRCNSVLDKIMDE---TDPVSLGRDT---SAEKRRKRFHDLQ 547
Db 476 HOSRLTALSKTVFEGKRFPPRCNSVLDKIMDE---TDPVSLGRDT---SAEKRRKRFHDLQ 547
Qy 548 DVLOKAFHEDKEENDRSGLSLSSSSSTS 574
Db 536 EIVQAFSKEDLGKSLSSSSSTS 562

RESULT 10

US-09-519-232-20

; Sequence 20, Application US/09519232

; Patent No. 6528702

; GENERAL INFORMATION:

; APPLICANT: Salmeron, John

; APPLICANT: Weislo, Laura

; APPLICANT: Willits, Michael

; APPLICANT: Mengiste, Tesfaye

; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF

; FILE REFERENCE: S-30857A/RTP2095

; CURRENT APPLICATION NUMBER: US/09/519,232

; CURRENT FILING DATE: 2000-03-06

; NUMBER OF SEQ ID NOS: 74

; SOFTWARE: Patent In Ver. 2.1

; SEQ ID NO 20

; LENGTH: 600

; TYPE: PRT

; ORGANISM: Arabidopsis thaliana

US-09-519-232-20

Query Match 41.1%; Score 1213.5; DB 4; Length 600;

Best Local Similarity 45.8%; Pred. No. 5.4e-115;

Matches 277; Conservative 105; Mismatches 172; Indels 51; Gaps 17;

Qy 1 MEPTSHVTNFAFSDSASVBECD---ADADAD-----VEALRRSLDNLAAFR 46
Db 1 MATTTTTTARFSDSYEFNTSGNSFFAAESSLDYPTFTLTPPEVSALKLLSNCLESYVD 60
Qy 47 SPEDFAFLADARIAVPGGGGGDLRVHRCVLSARSPLRGVFAARRAAAAGGGGDCGE 106
Db 61 SPE--TFVSDAKVL---AGGREVSFRCILSARIP-----VF-KSALATVKEQKSTTV 109
Qy 107 RLEURELLGGGEEVEGYEALRLVLYSGRVGDLPKAAACLVDEDCAHVGCHPAVAF 166
Db 110 KLQKLEI---ARDYEVGDFSVAVLAYVYSGRVSPKPGASACVDDCCCHVACRSKVD 165
Qy 167 MAQVLFPAASTFQVAELTNLFORLLDVLVDKVEVDNLLILSVANLCNCKMLLERCLDM 226
Db 166 MVEVLYLSFVFIQELVLYERQFLEIVDKVVEDILVIFKLDLTLCGTTTKKLLDRCIEI 225
Qy 227 VVRNLDMLTEKSLPPDVIKQIIDARLSGLISPENKGFPMKHVRRIRHALDSDDVELV 286
Db 226 IVKSDIELVLSLEKSLPQHFQIIDIREALCLEPPKLE---RHVKNIYKALDSDDVELV 281

Qy 287 RMLLTEGQTNLDDAFALHYAVEHCDSKITTELLDIALADVNRHNRPGTVLHIAARRREP 346
Db 282 KMLLLEGHTNLDEAYALHFAIHAACAVKTAVDLLELADVNLNRPRGYTVLHVAAMRKBP 341
Qy 347 KIIIVSLTLTKGARPADVTFDGRKAVOISKRLTKQGDYFGVTBEGKPSKDRLCIEILEQAE 406
Db 342 KLIISLLMKGANIULTDGRGTALVIVKRLTKADYKSTSTEDGTPSLKGGJCIEVLEH-E 400
Qy 407 RRDPLQ--EASVSLAMAGESLRGLLYLENRVALARIMFPEARVAMDIQVODGTLEFN 464
Db 401 QKLEVLSPIEASLSLPTPELRMLRLLYYENRVALARLLFPVETETVQGIKLBETCEFT 460
Qy 465 LGSGANPPPE--RORTTVDLINESPFIKKEHARMTALSKTVELGKRFPPRCNSVLDKIM 522
Db 461 -ASSLEPDHIGEKRTSLDLNMAPFQIHEKLSRLALCKTVELGKRYFKRCS--LDHFM 517
Qy 523 DDE--TDPVSLGRDT---SAEKRRKRFHDLQVLOKAFHEDKEENDRSGLSLSSSSSTSIGA 577
Db 518 DTEDNLHLASVEEDTPKRLQKQRYMELQETLTKMTFSEDKEE---CGKSTTPKPTS--A 572
Qy 578 IRPRR 582
Db 573 VRSNR 577

RESULT 11

US-09-519-232-72

; Sequence 72, Application US/09519232

; Patent No. 6528702

; GENERAL INFORMATION:

; APPLICANT: Salmeron, John

; APPLICANT: Weislo, Laura

; APPLICANT: Willits, Michael

; APPLICANT: Mengiste, Tesfaye

; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF

; FILE REFERENCE: S-30857A/RTP2095

; CURRENT APPLICATION NUMBER: US/09/519,232

; CURRENT FILING DATE: 2000-03-06

; NUMBER OF SEQ ID NOS: 74

; SOFTWARE: Patent In Ver. 2.1

; SEQ ID NO 72

; LENGTH: 601

; TYPE: PRT

; ORGANISM: Arabidopsis thaliana

US-09-519-232-72

Query Match 41.1%; Score 1213.5; DB 4; Length 601;

Best Local Similarity 45.8%; Pred. No. 5.5e-115;

Matches 277; Conservative 105; Mismatches 172; Indels 51; Gaps 17;

Qy 1 MEPTSHVTNFAFSDSASVBECD---ADADAD-----VEALRRSLDNLAAFR 46
Db 2 MATTTTTTARFSDSYEFNTSGNSFFAAESSLDYPTFTLTPPEVSALKLLSNCLESYVD 61
Qy 47 SPEDFAFLADARIAVPGGGGGDLRVHRCVLSARSPLRGVFAARRAAAAGGGGDCGE 106
Db 62 SPE--TFVSDAKVL---AGGREVSFRCILSARIP-----VF-KSALATVKEQKSTTV 110
Qy 107 RLEURELLGGGEEVEGYEALRLVLYSGRVGDLPKAAACLVDEDCAHVGCHPAVAF 166
Db 111 KLQKLEI---ARDYEVGDFSVAVLAYVYSGRVSPKPGASACVDDCCCHVACRSKVD 166
Qy 167 MAQVLFPAASTFQVAELTNLFORLLDVLVDKVEVDNLLILSVANLCNCKMLLERCLDM 226
Db 167 MVEVLYLSFVFIQELVLYERQFLEIVDKVVEDILVIFKLDLTLCGTTTKKLLDRCIEI 226
Qy 227 VVRNLDMLTEKSLPPDVIKQIIDARLSGLISPENKGFPMKHVRRIRHALDSDDVELV 286
Db 227 IVKSDIELVLSLEKSLPQHFQIIDIREALCLEPPKLE---RHVKNIYKALDSDDVELV 282
Qy 287 RMLLTEGQTNLDDAFALHYAVEHCDSKITTELLDIALADVNRHNRPGTVLHIAARRREP 346
Db 283 KMLLLEGHTNLDEAYALHFAIHAACAVKTAVDLLELADVNLNRPRGYTVLHVAAMRKBP 342


```
; INFORMATION FOR SEQ ID NO: 10:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 469 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-989-478-10

Query Match      38.4%; Score 1134; DB 2; Length 469;
Best Local Similarity 51.4%; Pred. No. 4.8e-107;
Matches 233; Conservative 89; Mismatches 115; Indels 16; Gaps 5;

QY 131 VLDLYSGRVDLPKAAACLVDEDCAHVGHCHPAVAFMAQVLFAASTFOVAELTNLQFRL 190
DB 7 VLAVYSSRVPPPGVSECADENCCHVACPAVDFMLEVLYLAFIFKIPELITLYQRL 66
QY 191 LDVLDKVEVDNLLILSVANLCNKSCKMLERCLDMVRSNLDITTEKSLPPDVVKQII 250
DB 67 LDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNDVMVSLKSLPEELVKKEII 126
QY 251 DARLSGLISPENKGFNKHVRIIRHALSDDDVELVRMLLTGQTNLDDAFALHVAVEHC 310
DB 127 DRKELGLEVPKVK---KHVSNVHKALSDSDIELVKLLKEDHTNLDACALHFAVAYC 182
QY 311 DSKITTELDLADLVNHNPRGYTVLHIAARRREPKEIIVSLTTKGARPAVDTFDGRKAV 370
DB 183 NVKTATDILLKDLADVNHNPRGYTVLHVAAMRKPEQLILSLEKASASEATLEGRAL 242
QY 371 QISKRLTKQGYFGVTEGKSPKDRLCIEILEQARRDPOLGEASVSLAMAGESLGRRL 430
DB 243 MIAKOATWAVECNPIPEQCKHSLKRLCVELLEQDKREIQIPRDVPPSFAVADELKMTL 302
QY 431 LYLENRVALARIMPEARVAMDAOVDTGLEFNLSGANPPPER---QRTTVDLNESP 486
DB 303 LDLENRVALAORLFFTEAQAAMEIAEMKGTCEFIIVTS---LEPDLTKTKTSFGVKIAP 359

; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/996,685
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/761,543
; FILING DATE: 6-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,378
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,379
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,382
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,730
; FILING DATE: 10-JAN-1997
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/035,021
; FILING DATE: 10-JAN-1997
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/035,022
; FILING DATE: 10-JAN-1997
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/035,024
; FILING DATE: 10-JAN-1997
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/875,015
; FILING DATE: 16-JUL-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Meigs, J. Timothy
; REGISTRATION NUMBER: 38,241
; REFERENCE/DOCKET NUMBER: PF/5-21215/P1/CGC1912
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (919) 541-8587
; TELEFAX: (919) 541-8689
; INFORMATION FOR SEQ ID NO: 10:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 469 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-996-685-10

Query Match      38.4%; Score 1134; DB 3; Length 469;
Best Local Similarity 51.4%; Pred. No. 4.8e-107;
Matches 233; Conservative 89; Mismatches 115; Indels 16; Gaps 5;

QY 131 VLDLYSGRVDLPKAAACLVDEDCAHVGHCHPAVAFMAQVLFAASTFOVAELTNLQFRL 190
DB 7 VLAVYSSRVPPPGVSECADENCCHVACPAVDFMLEVLYLAFIFKIPELITLYQRL 66
QY 191 LDVLDKVEVDNLLILSVANLCNKSCKMLERCLDMVRSNLDITTEKSLPPDVVKQII 250
DB 67 LDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNDVMVSLKSLPEELVKKEII 126
QY 251 DARLSGLISPENKGFNKHVRIIRHALSDDDVELVRMLLTGQTNLDDAFALHVAVEHC 310
DB 127 DRKELGLEVPKVK---KHVSNVHKALSDSDIELVKLLKEDHTNLDACALHFAVAYC 182
QY 311 DSKITTELDLADLVNHNPRGYTVLHIAARRREPKEIIVSLTTKGARPAVDTFDGRKAV 370
DB 183 NVKTATDILLKDLADVNHNPRGYTVLHVAAMRKPEQLILSLEKASASEATLEGRAL 242
QY 371 QISKRLTKQGYFGVTEGKSPKDRLCIEILEQARRDPOLGEASVSLAMAGESLGRRL 430
DB 243 MIAKOATWAVECNPIPEQCKHSLKRLCVELLEQDKREIQIPRDVPPSFAVADELKMTL 302
QY 431 LYLENRVALARIMPEARVAMDAOVDTGLEFNLSGANPPPER---QRTTVDLNESP 486
DB 303 LDLENRVALAORLFFTEAQAAMEIAEMKGTCEFIIVTS---LEPDLTKTKTSFGVKIAP 359

; INFORMATION FOR SEQ ID NO: 10:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 469 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-996-685-10

; GENERAL INFORMATION:
; APPLICANT: Ryals, John
; APPLICANT: Friedlich, Leslie
; APPLICANT: Uknes, Scott
; APPLICANT: Molina, Antonio
; APPLICANT: Ruess, Wilhelm
; APPLICANT: Knauf-Beiter, Gertrude
; APPLICANT: Kung, Ruth
; APPLICANT: Kessmann, Helmut
; APPLICANT: Oostendorp, Michael
; TITLE OF INVENTION: METHOD FOR PROTECTING PLANTS
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: No. 6031153artis Corporation
; STREET: 3054 Cornwallis Road
; CITY: Research Triangle Park
; STATE: No. 6031153th Carolina
; COUNTRY: USA
; ZIP: 27709
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
```

487	QY	FTMKKEHLARMTALSKTVELGKRFPFRCNSVLDKIMD-DETDVPVSGRDTSAEKR-----K	541
488			
489			
490			
491			
492			
493			
494			
495			
496			
497			
498			
499			
500			
501			
502			
503			
504			
505			
506			
507			
508			
509			
510			
511			
512			
513			
514			
515			
516			
517			
518			
519			
520			
521			
522			
523			
524			
525			
526			
527			
528			
529			
530			
531			
532			
533			
534			
535			
536			
537			
538			
539			
540			
541			
542	QY	RFHDLQDLQLKAFHEDKEENDRSLGSSSSGSTS	574
543			
544			
545			
546			
547			
548			
549			
550			
551			
552			
553			
554			
555			
556			
557			
558			
559			
560			
561			
562			
563			
564			
565			
566			
567			
568			
569			
570			
571			
572			
573			
574			
575			
576			
577			
578			
579			
580			
581			
582			
583			
584			
585			
586			
587			
588			
589			
590			
591			
592			
593			
594			
595			
596			
597			
598			
599			
600			
601			
602			
603			
604			
605			

Search completed: December 4, 2003, 19:21:47
Job time : 23 secs

Result No.	Score	Query		Length	DB	ID	Description
		Match	✖				
1	2020.8	28.9	99.1	2194	12	US-09-848-841-9	Sequence 9, Appli
2	590.2	28.1	98.9	1731	12	US-10-328-675A-3	Sequence 3, Appli
3	563.4	27.6	1767	12	US-10-328-675A-1	Sequence 1, Appli	
4	563.4	27.6	2172	8	US-08-908-884-13	Sequence 13, Appli	
5	563.4	27.6	2172	9	US-09-908-323-13	Sequence 13, Appli	
6	562	27.5	2296	12	US-10-328-675A-63	Sequence 63, Appli	
7	422.2	20.7	2104	8	US-08-908-884-2	Sequence 2, Appli	
8	422.2	20.7	2104	9	US-09-908-323-2	Sequence 2, Appli	
9	422.2	20.7	2104	11	US-09-934-455-73	Sequence 73, Appli	
10	422.2	20.7	2104	12	US-10-325-068-241	Sequence 241, Appli	
11	381.8	18.7	1740	12	US-10-328-675A-5	Sequence 5, Appli	
12	380.4	18.6	1803	12	US-10-328-675A-19	Sequence 19, Appli	
13	380.4	18.6	1818	12	US-10-328-675A-71	Sequence 71, Appli	
14	380.4	18.6	2083	11	US-09-934-455-433	Sequence 433, Appli	
15	359.8	17.6	653	12	US-10-328-675A-45	Sequence 45, Appli	
16	351.6	17.2	2717	12	US-09-848-841-15	Sequence 15, Appli	

QY 61 GAGAGGGGAGCGCGAGCCGCGAGCGCGAGCGCGCGCTCTCCGCGCTCTCCGAGAAC 120
Db 188 GAGAGGGGGGCGCGCGAGCGCGAGCGCGAGCGCGCGCTCTCCGAGAAC 247
QY 121 CTCGCGCGCGCGCTCTCCGCGAGCGCGAGCGCGCGCTCTCCGCGCGCGCGCGCGCG 180
Db 248 CTCGCGCGCGCGCTCTCCGCGAGCGCGAGCGCGCGCTCTCCGCGCGCGCGCGCGCG 307
QY 181 CTCG 240
Db 308 CTCG 367
QY 241 CGGAGCG 300
Db 368 CGGAGCG 427
QY 301 GCGAGGATGGCAGCGAGGCGTGGAGCTCCGCGAGCGCGCGCGCGCGCGCGCGCGCGCG 360
Db 428 GCGAGGATGGCAGCGAGGCGTGGAGCTCCGCGAGCGCGCGCGCGCGCGCGCGCGCGCG 487
QY 361 GTGAGGTCGGGTACGAGCGCGTCCGCGTGGTGTCTGCTGCTGCTGCTGCTGCTGCTGCT 420
Db 488 GTGAGGTCGGGTACGAGCGCGTCCGCGTGGTGTCTGCTGCTGCTGCTGCTGCTGCTGCT 547
QY 421 GCGGACCTGCG 480
Db 548 GCGGACCTGCG 607
QY 481 CACCCCGCGCGTTCATGCGCGAGGTCCTCTCTGCGCGCGCGCGCGCGCGCGCGCGCGCG 540
Db 608 CACCCCGCGCGTTCATGCGCGAGGTCCTCTCTGCGCGCGCGCGCGCGCGCGCGCGCGCG 667
QY 541 GAGCTCACCAACTCTTCAGCGCGCGTCTCTCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 600
Db 668 GAGCTCACCAACTCTTCAGCGCGCGTCTCTCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 727
QY 601 AACCTCTATTGATCTTATCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 660
Db 728 AACCTCTATTGATCTTATCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 787
QY 661 GAAAGATGCTTGTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 720
Db 788 GAAAGATGCTTGTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 847
QY 721 TTGCTCTCAGATGTTATCAAGCAGATTTATGATGATGATGATGATGATGATGATGATGAT 780
Db 848 TTGCTCTCAGATGTTATCAAGCAGATTTATGATGATGATGATGATGATGATGATGATGAT 907
QY 781 CCAGAAACCAAGGATTTCTTAAACCAACATGATGATGATGATGATGATGATGATGATGAT 840
Db 908 CCAGAAACCAAGGATTTCTTAAACCAACATGATGATGATGATGATGATGATGATGATGAT 967
QY 841 GACGATGTAGCTAGTACGATGCTGCTCACTGAGGACAGACAAATCTTGATGATGATGATG 900
Db 968 GACGATGTAGCTAGTACGATGCTGCTCACTGAGGACAGACAAATCTTGATGATGATGATG 1027
QY 901 TTGCTCTCAGATGTTATCAAGCAGATTTATGATGATGATGATGATGATGATGATGATGAT 960
Db 1028 TTGCTCTCAGATGTTATCAAGCAGATTTATGATGATGATGATGATGATGATGATGATGAT 1087
QY 961 CTCGCACTTGCAGATGTTATCATAGAAACCAAGAGGTTATGATGATGATGATGATGATGAT 1020
Db 1088 CTCGCACTTGCAGATGTTATCATAGAAACCAAGAGGTTATGATGATGATGATGATGATGAT 1147
QY 1021 GCGAGCGAAGAGAGCTTAAATCATATTGCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT 1080
Db 1148 GCGAGCGAAGAGAGCTTAAATCATATTGCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT 1207
QY 1081 GATGTTACATTCGATGGGAGAAAGCGGTTCAATCTCAAAAGACTTCAAAACCAAGGG 1140
Db 1208 GATGTTACATTCGATGGGAGAAAGCGGTTCAATCTCAAAAGACTTCAAAACCAAGGG 1267

QY 1141 GATTACTTTGGGTTACCGAAGAGGAAACCTTCTCCAAAGATAGTATTGATTGAA 1200
Db 1268 GATTACTTTGGGTTACCGAAGAGGAAACCTTCTCCAAAGATAGTATTGATTGAA 1327
QY 1201 ATACTGGAGCAAGCTGAAAAGAGGACCCCAACTCTCGGAGAGCATCAGTTTCTCTGCA 1260
Db 1328 ATACTGGAGCAAGCTGAAAAGAGGACCCCAACTCTCGGAGAGCATCAGTTTCTCTGCA 1387
QY 1261 ATGCGAGGTGAGAGTCTACGAGGAGGTTGCTGTATCTTGAANAACCGAGTTGCTTTCGCA 1320
Db 1388 ATGCGAGGTGAGAGTCTACGAGGAGGTTGCTGTATCTTGAANAACCGAGTTGCTTTCGCG 1447
QY 1321 AGGATTTATGTTTCCGATGGAGCAAGAGTAGCAATGATATTGCTCAAGTGGATGCAACT 1380
Db 1448 AGGATTTATGTTTCCGATGGAGCAAGAGTAGCAATGATATTGCTCAAGTGGATGCAACT 1507
QY 1381 TTGGAATTTAACTTGGGTTCTGGTCAAACTCCACTCTCTGAAAGACAAACGACAACTGTTT 1440
Db 1508 TTGGAATTTAACTTGGGTTCTGGTCAAACTCCACTCTCTGAAAGACAAACGACAACTGTTT 1567
QY 1441 GATCTAAATGAAGTCTCTTTTATTAATGAAGAAGAACACTTTAGCTCCGATGACAGCACTC 1500
Db 1568 GATCTAAATGAAGTCTCTTTTATTAATGAAGAAGAACACTTTAGCTCCGATGACAGCACTC 1627
QY 1501 TCCAAAACAGTGGAGCTCGGAAAACGCTTTTCCCGGATGTTCCGAACTGCTCGACAAG 1560
Db 1628 TCCAAAACAGTGGAGCTCGGAAAACGCTTTTCCCGGATGTTCCGAACTGCTCGACAAG 1687
QY 1561 ATCATGATGATGAAAACGATGATCGGTTTCCCTCGGAAAGACACGCTCCGCGGAGAGAGG 1620
Db 1688 ATCATGATGATGAAAACGATGATCGGTTTCCCTCGGAAAGACACGCTCCGCGGAGAGAGG 1747
QY 1621 AAGAGGTTTCATGACCTGCGAGGATGTTCTTCAGAAAGGACATTCACAGAGCAAGAGGAG 1680
Db 1748 AAGAGGTTTCATGACCTGCGAGGATGTTCTTCAGAAAGGACATTCACAGAGCAAGAGGAG 1807
QY 1681 AATGACAGGTCGGGCTCTCGTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 1740
Db 1808 AATGACAGGTCGGGCTCTCGTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 1867
QY 1741 AGGAGATGAAACCACTTGGTCTCCAAATAGTTGGCATATTGATAGTAACTGCTCTCTG 1800
Db 1868 AGGAGATGAAACCACTTGGTCTCCAAATAGTTGGCATATTGATAGTAACTGCTCTCTG 1927
QY 1801 AGCTACTCACTGATGTTGCTTCTGCTCAATTTGCCCCCAAAATATATTTCTCAATGGTTT 1860
Db 1928 AGCTACTCACTGATGTTGCTTCTGCTCAATTTGCCCCCAAAATATATTTCTCAATGGTTT 1987
QY 1861 AGGCTTGTACAGTATTAGTTCTTACAGCTATTGCCCGCTCAATTGTGAAAACGAGAGTT 1920
Db 1988 AGGCTTGTACAGTATTAGTTCTTACAGCTATTGCCCGCTCAATTGTGAAAACGAGAGTT 2047
QY 1921 TCACCTAGTCTTGTACTCGAGGTGATACAGTGTGTAATTTTGTAGTTGCTGCTGCTGCTG 1980
Db 2048 TCACCTAGTCTTGTACTCGAGGTGATACAGTGTGTAATTTTGTAGTTGCTGCTGCTGCTG 2107
QY 1981 TTTCCAGTGGTTGCTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 2040
Db 2108 TTTCCAGTGGTTGCTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 2167

RESULT 2

US-10-328-675A-3
; Sequence 3, Application US/10328675A
; Publication No. US2003015917A1
; GENERAL INFORMATION:
; APPLICANT: Salmoron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: 30857USNPDI1
; CURRENT APPLICATION NUMBER: US/10/328, 675A
; CURRENT FILING DATE: 2002-12-23

```
; PRIOR APPLICATION NUMBER: 09/519,232
; PRIOR FILING DATE: 2000-03-06
; PRIOR APPLICATION NUMBER: 60/219,338
; PRIOR FILING DATE: 1999-03-09
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 1731
; TYPE: DNA
; ORGANISM: Lycopersicon esculentum
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(1728)
; OTHER INFORMATION: Full length tomato cDNA sequence
US-10-328-675A-3

Query Match      28.9%; Score 590.2; DB 12; Length 1731;
Best Local Similarity 65.2%; Pred. No. 3.2e-126;
Matches 906; Conservative 0; Mismatches 468; Indels 15; Gaps 2;

Qy 356 AGGAGTGGAGTGGGTCGAGGCGCTGCGGCTGGTCTCGACTACCTTACAGCGGCC 415
Db |||||
Qy 308 AAGAGTATGAGTGAGTTTGTATGCGGTGCTCAGTGTGCTGCTTATTTGATAGTGA 367
Db |||||
Qy 416 CGCTCGGCGACTGCCAAGCGGCGCTGCTCGCTCGAGGAGACTGCCGCCAGCTCG 475
Db |||||
Qy 368 AAGTTAGCGCTGCATCTAAGATGTGTGTTGTGTGACAAATGAGTGTGCAATGAG 427
Db |||||
Qy 476 GGTGCCACCCCGCGCTGCTATGCGGCGAGTCTCTTCCGCCCTCCACCTTCCAGG 535
Db |||||
Qy 428 CTGTGAGCGCAGCTGTGCGCTTCATGTTTGTGAGTTTGTACGCATCTTTTACCTT 487
Db |||||
Qy 536 TCGCGAGCTCACCACCTCTTCCAGCGCGCTCTCTTGTATGCTCTTGAAGTTGAAG 595
Db |||||
Qy 488 TCTCTCAATTGCTGACAAAGTTTCAGAGACACCTATTGGATATTCTTGACAAAGCTG 547
Db |||||
Qy 596 TAGATAACCTTCTATTGATCTATCTGTGCGCACTTATGCAAACTTGTGCATGAAC 655
Db |||||
Qy 548 CAGATGATGTAATGATGTTTATCCGTTGCAAACTTGGCGGTAAGCATGTGAAAGAT 607
Db |||||
Qy 656 TGCTTGAAGAGTCCCTGATATGTTAGTCCCGTCAAACTTGACATGATTACTCTTGAGA 715
Db |||||
Qy 608 TACTTTCAAGATGCATTGATATTATTGCAAGTCTAATGTTGATATCAATCCCTTGATA 667
Db |||||
Qy 716 AGTCATTCCTCCAGATGTTATCAAGCAGATTAATGATCGACGCTCAAGCCTCGGATTA 775
Db |||||
Qy 668 AGTCCTTCCCTCATGACATTGTAACAACTTCACTGATTCAGTCTGCTGAACTTGTCTGC 727
Db |||||
Qy 776 TTTACACAGAAAACAGGAGTTTCTTAACAACTGTGAGGAGGATACACAGAGCCCTTG 835
Db |||||
Qy 728 AAGGCGCTGAAAGCAATGGTTTCTCTGATAAATGTTAAGAGGATACATAGAGCATTTG 787
Db |||||
Qy 836 ACTCTGACGATGTAGAGTGTAGTCAAGATGCTCTCACTGAAGGACAGACAATCTTGATG 895
Db |||||
Qy 788 ACTCTGATGATGTTGAATTAAGGATGTTCTTAAGAGGGGATACCTACTCTTGATG 847
Db |||||
Qy 896 ATGCGTTTGCACCTGACCTACGCGCTCGAATTTGTGACTTCCAAAATTTACAAACCGAGCTTT 955
Db |||||
Qy 848 ATGCATATGCTCTCCACTATGCTGTAGCATATTGCGATGCAAGACTACAGCAGACTTT 907
Db |||||
Qy 956 TGGATCTCGACTTCGAGATGTTAATCATAGAAACCCAGAGGTTATCTGTTCTTCA 1015
Db |||||
Qy 908 TAGATCTTTCACTTCTGATGTTAATCATCAAAATCCTAGAGGACACACGCTACTTCATG 967
Db |||||
Qy 1016 TTGCTCGGAGGAGAGAGCCCTTAAATCATTTGCTCTCCCTTTTAAACAGGGGCTCGAC 1075
Db |||||
Qy 968 TTGCTGCCATGAGGAAGAACCTTAAATTAATAGTGTCCCTTTTAAACAAAGGAGCTAGAC 1027
Db |||||
Qy 1076 CAGCAGATGTTTACATTCGATGGGAGAAAAGCGGTTCAAAATCTCAAAAAGACTTAAACAAAC 1135
Db |||||
Qy 1028 CTTCTGATCTGACATCCGATGCAAAAAGACATTCAAATTCCTAAGAGGCTCACTAGGC 1087
Db |||||
Qy 1136 AAGGGATTAATCTTTGGGTTACCGAAGAGGAAAACCTTCTCCAAAAGATAGTTATGTA 1195
Db |||||
```

```
Db 1088 TTGTAGATTTTACCAGTCTACAGAGGAAGAAATCTGCTCCAAAGGATCGGTATGCA 1147
Qy |||||
Db 1196 TTGAAATACCTGGAGCAAGCTGAAAGAGGACCCCAACCTCGGAGAGCATCAGTTTCTC 1255
Qy |||||
Db 1148 TTGAGATTTCTGGAGCAAGAGAGATCCACTACTAGGAGAGCTTCATTATCTC 1207
Qy |||||
Db 1256 TTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTTGAAAACCGAGTTGCTT 1315
Qy |||||
Db 1208 TTGCTATGGCAGGCGATGATTTGCTATGAAGCTGTTATACCTTTGAAAATAGAGTTGCTC 1267
Qy |||||
Db 1316 TGGCAAGGATTATGTTTCCGATGGAGCAAGAGTAGCAATGGATATTGCTCAAGTGGATG 1375
Qy |||||
Db 1268 TGGCTAAACTCTTTTCCCATGGAAGAAAGTTGCAATGAGACATTCGCAAGTTGATG 1327
Qy |||||
Db 1376 GAACTTTTGAATTTAACTGGGTTCTGGTGCAAAATCCACTCTTCCGAAAGACACGACAA 1435
Qy |||||
Db 1328 GCACGTCTGAATTAACCTTGGCTAGCATGAGGAAGAGATAGCTGATGCACAGAGGACAA 1387
Qy |||||
Db 1436 CTGTTGATCTAAATGAAGTCTTTTCAATATGAAGAAAGAACACTTAGCTCGGATGACAG 1495
Qy |||||
Db 1388 CAGTGGATTTTGAACGAGGCTCTTTTCAAGATGAAAGAGGAGCCTTGAATCGGCTTAGGG 1447
Qy |||||
Db 1496 CACTCTCAAAACAGTGGAGCTCGGAAACGCTTTTCCCGCGATGTTTCGAAACGTGCTCG 1555
Qy |||||
Db 1448 CTCTCTCTAGAACTGTGGAACCTTGGAAACCGGTTCTTTCCAGCTTGTTCAGAACTTCTAA 1507
Qy |||||
Db 1556 ACAAGATCATGATGATGA-----AACTGATCGGTTTCCCTCGGAAGACACGCTCG 1609
Qy |||||
Db 1508 ATAAGATCATGATGCTGATGACTTGTCTGAGATAGCTTACATGGGAATGATACAGTAG 1567
Qy |||||
Db 1610 CGGA-----GAAAGAGGAAGAGTTTTCATGACCTGCGAGGATGTTCTTCAGAAAGGAT 1660
Qy |||||
Db 1568 AAGAGCGCTCACTGAAGAAAGCAAGGATACATGGAACCTTCAAGAAATTTTGTCTAAAGCAT 1627
Qy |||||
Db 1661 TCCACGAGGACAAAGAGGAGAAATGACAGGTGCGGGCTCTCGTCTGCTCATCGACAT 1720
Qy |||||
Db 1628 TCACGGAGGATAAAGAAAGATTTGTAAGACTAATGCTCTCTCTCTCTCTCTCTCTCT 1687
Qy |||||
Db 1721 CGATCGGGG 1729
Qy |||||
Db 1688 CTNAGGGAG 1696
Qy |||||

RESULT 3
US-10-328-675A-1
; Sequence 1, Application US/10328675A
; Publication No. US2003015917A1
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: 30857USNPDI
; CURRENT APPLICATION NUMBER: US/10/328,675A
; CURRENT FILING DATE: 2002-12-23
; PRIOR APPLICATION NUMBER: 09/519,232
; PRIOR FILING DATE: 2000-03-06
; PRIOR APPLICATION NUMBER: 60/219,338
; PRIOR FILING DATE: 1999-03-09
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 1767
; TYPE: DNA
; ORGANISM: Nicotiana tabacum
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(1764)
; OTHER INFORMATION: Full length tobacco cDNA sequence
US-10-328-675A-1
```

Query Match

27.6%; Score 563.4; DB 12; Length 1767;

[illegible]

Qy	1436	CTGTTGATCTAAATGAAGTCCCTTTTCATATGAAGAAGACACTTAGTTCGGATGACAG	1495
Db	1660	CAGTAGATTGGAACGAGGCTCCCTTTCAAGATAAAGAGGAGCACTTGAATCGCGCTTAGAG	1719
Qy	1496	CACCTCTCAAAACACATGGAGCTCGGAAACGCCTTTTTCCCGCATGTTTGAACGTCGTCG	1555
Db	1720	CACCTCTAGAACTGTAGAACCTTTTGGANAACGCCTCTTTCCACGTTGTTCAGAGTTCTAA	1779
Qy	1556	ACAAGATCATGGATGATGA-----ACTGATCCGGTTTTCCCTCGGAAGAGACACGTCGG	1609
Db	1780	ATAAGATCATGGATGCTGATGACTGTGCTGAGATAGCTTTACATGGGGAAATGATACGGCAG	1839
Qy	1610	CGGA-----GAAGAGGAACAGGTTTCATCACCTCGCAGGATGTTTCTTCAGAAAGGCAT	1660
Db	1840	AAGAGCGTCAACTGAAGAAGCAAAAGGTACATGGAACCTTCAAGAAATCTGACTTAAGCAT	1899
Qy	1661	TCCACGAGGACAAAGGAGGAGAAATGACAGGTCGGGGCTCTCGTCGTGTCGTGTCATC	1715
Db	1900	TCAC TGAGGATAAAGAAGAAATATGATAAGACTAACCAACATCTCCTCATCTTGTTTC	1954

RESULT 5

```

US-09-908-323-13
; Sequence 13, Application US/09908323
; Patent No. US20020073447A1
; GENERAL INFORMATION:
; APPLICANT: Dong et al.
; TITLE OF INVENTION: ACQUIRED RESISTANCE GENES AND USES THEREOF
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Clark & Elbing LLP
; STREET: 176 Federal Street
; CITY: Boston
; STATE: MA
; COUNTRY: USA
; ZIP: 02110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/908,323
; FILING DATE: 17-Jul-2001
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/908,884
; FILING DATE: <Unknown>
; APPLICATION NUMBER: 60/035,166
; FILING DATE: January 10, 1997
; APPLICATION NUMBER: 60/046,769
; FILING DATE: May 16, 1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Elbing, karen L
; REGISTRATION NUMBER: 35,238
; REFERENCE/DOCKET NUMBER: 00786/339004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-428-0200
; TELEFAX: 617-428-7045
; INFORMATION FOR SEQ ID NO: 13:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2172 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; SEQUENCE DESCRIPTION: SEQ ID NO: 13:
US-09-908-323-13

```

Query Match	27.6%	Score 563.4;	DB 9;	Length 2172;
Best Local Similarity	64.3%	Pred. No. 5.4e-120;		
Matches 884; Conservative	0;	Mismatches 476;	Indels 15;	Gaps 2;


```
Db 546 TTGCGTTTATAGTTATTTGATAGTGGCAAGTTAGGAATTTGCTAGAGGAATTTGTG 605
Qy 446 TCTGGTTCGACGAGACTGCGCCACGTCGGGTGCCACCCGCCGTCGCTTCATGGCGC 505
Db 606 TTTGTGTTGATGAGGATTGCTCTCATGAAGCTTGTGCTGCTGTTGATTTGTTGTTG 665
Qy 506 AGGTCTCTTCCGCGCTCCACTTCCAGTTCGCGAGCTCACCACTTCCAGCGGC 565
Db 666 AGGTCTCTTATTTGTTCTCACAAATTCGAGATTGTCGAATTTGGTTTCGCTTATCAGAGC 725
Qy 566 GTCTCTTCTGATGCTCTGATAGGTTGAAGTAGATAAATCTTATGATCTTATCTGTTG 625
Db 726 ACCTACTGATATTTCTGACAGATTGACCNAGTAGCTTCTAGTAGTTATCTGTCG 785
Qy 626 CCAACTTATGCAACAAATCTTTCATGAACTGCTTTGAAAGATGCTTGTATGTTAGTCC 685
Db 786 CTGAGATGTGTGAATCGGTGTGACGATTGCTGCAAGGTGTTATGACAAGATTGTGA 845
Qy 686 GGTCAAACTTTGACATGATTACTCTTGAGAAGTCAATTCCTCCAGATGTTATCAAGCAGA 745
Db 846 GGTCCGATTTGACGTAAACCACTTGTGATTAATCTTCCGCGAGAAATGTTGTGAACAGA 905
Qy 746 TTATTGATGACGCTTAAGCTCGGATTAAATTTTACACAGAAACAAAGGATTTCCCTACA 805
Db 906 TAATCGACACGGAAGAACTTGGTTTACTGAACCTTGGCGTGTGAGTTTCTTGATA 965
Qy 806 AACATGTGAGGAGTATACAGAGCCCTTGTACTCTGACGATGTAGAGCTAGTCAGGATGC 865
Db 966 AGCATGTGAAGAAATACACAGAGCTTGGAAATCCGATGATGTAGATTAGTCAGAATGC 1025
Qy 866 TGCTCAGTGAAGGACAGACAAATCTTGATGATGCGTTTGCATGCACTACGCGCTGCAAC 925
Db 1026 TTTTAAAGAGCGCCATCAACTCTAGATGATGATATGCCCTTCACTATGCTGTGGCAC 1085
Qy 926 ATTGTGACTCAAAATTAACACGAGCTTTGGATCTCGCACTTCAGATGTTATCATATA 985
Db 1086 ATTGTGATGCCAGACCAACGAGCTTTGAGCTTGGGCTTCGAGATGTTATCTTA 1145
Qy 986 GAAACCCAGAGTTTATCTGTTTTCATATGCTGCGAGGCGAAGAGAGCCCTAAATCA 1045
Db 1146 GAAATCTAAGGGTCACTGTGTACATGTGGCAGCCATGAGAAAGAGCCTAAGATAA 1205
Qy 1046 TTGTCTCCCTTTTAAACGAGGGGCTGCACAGCAGATGTTACATTCGATGGGAGAAAG 1105
Db 1206 TTGTATCTTGTATCAAGGAGGCCATCCGCTCTGTATATAACATCAGATGATATAAAG 1265
Qy 1106 CGGTTCAATCTCAAAAGACTTAACAAACAGGGGNTTACTTTGGGTTACCGAAGAG 1165
Db 1266 CACTGCAGATGCAAGAGACTTAACAAAGCTGTGGACTTCTATAAACTACAGAACAG 1325
Qy 1166 GAAACCTTCTCAAAAGATAGTTATGTTATTTGAAATACTGGAGCAAGCTGAAAGAGGG 1225
Db 1326 GAAAGATGCAACCAAGGATCGTTGTGATTTGAATATCTGGAGCAAGCTGAAAGAGAG 1385
Qy 1226 ACCCAAACTCGGAGAGATCAGTTTCTCTTGAATCGGAGGTGAGAGTCTACAGAGAA 1285
Db 1386 AACCAATCTAGGAGAGGTTCTGTTTCTCTTGAAGGAGGAGATGATCTGCGTATGA 1445
Qy 1286 GSTTGTCTATCTGAAACCGAGTTGCTTTGGCAAGGATTTATGTTTCGGATGGAGCAA 1345
Db 1446 AGCTATTATCTTGAATATAGTTGACATGCTGCTGCGTGTCTTTTCCAATGGAAGCGA 1505
Qy 1346 GAGTAGCAATGGATATTGCTCAAGTGGATGGAACCTTTGGAATTTAACTCGGTTCTGTTG 1405
Db 1506 AAGTGGCTATGATATTCTCAAGTGGAGGAACTTCTGAAATTCACATTGT----- 1556
Qy 1406 CAATCCACCTCTGAAAGACAAACGCAACCTGTTGATCTAAATGAAAGTCTTTTCAATA 1465
Db 1557 CAAAGAAATATAGCTGATGACGAGAAATTCGGTGGACTTGAATGAGGCTCCCTTTATAT 1616
Qy 1466 TGAAGAGAGACACTTAGCTCGGATGACAGCACTCTCCAAACAGTGAGCTCGGAAAC 1525
```

```
Db 1617 TGAAGAGGAGCATTTCAGAGGATGAAGCACTGTCTTAAACTGTTGAGCTTGCACAGC 1676
Qy 1526 GCTTTTTCCTCCCGATGTTTCGAACGTGTCGACAAAGATCATG-----GATGATGAACATG 1579
Db 1677 GTTTCTTTCCACGCTGCTCCGATGTTCTTAATAAGATTATGGACGCCGGAAGATCTATCAC 1736
Qy 1580 ATCCGTTTCCCTCGGAGAGACACGTCGCGGA-----GAAGAGGAGAGGTTTC 1630
Db 1737 AGCTTTCATTTTATAGGAAAGATATCTCCAGAGGAACGCGCAAGGAAGAAACCATACC 1796
Qy 1631 ATGACCTGCAGGATGTTCTTCAGAAAGCATTTCCAGAGGACAAAGAGGAGAAATGACAGT 1690
Db 1797 TTGAAGTCAAGAGCGTTTAACTAAGGCTTTTACAGAGGACAAAGAGAGTTTGACCGTT 1856
Qy 1691 CGGGGCTCTCTGCTGCTGCTCATCGACATCGATCGGG 1728
Db 1857 CTACATTATCATCATCGTCTGCTCGACTCCAATGGGG 1894
```

RESULT 7

```
US-08-908-884-2
; Sequence 2, Application US/08908884
; Publication No. US20020138872A1
; GENERAL INFORMATION:
; APPLICANT: Dong et al.
; TITLE OF INVENTION: ACQUIRED RESISTANCE GENES AND USES THEREOF
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Clark & Elbing LLP
; STREET: 176 Federal Street
; CITY: Boston
; STATE: MA
; COUNTRY: USA
; ZIP: 02110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSeq for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/908,884
; FILING DATE:
; CLASSIFICATION: 800
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 60/023,851
; FILING DATE: August 9, 1996
; APPLICATION NUMBER: 60/035,166
; FILING DATE: January 10, 1997
; APPLICATION NUMBER: 60/046,769
; FILING DATE: May 16, 1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Elbing, Karen L
; REGISTRATION NUMBER: 35,238
; REFERENCE/DOCKET NUMBER: 00786/339004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-428-0200
; TELEFAX: 617-428-7045
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2104 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; FEATURE:
; NAME/KEY: Coding Sequence
; LOCATION: 93...1871
; OTHER INFORMATION:
US-08-908-884-2
```

```
Query Match 20.7%; Score 422.2; DB 8; Length 2104;
Best Local Similarity 58.4%; Pred. No. 2.2e-87;
Matches 824; Conservative 0; Mismatches 556; Indels 30; Gaps 4;
```


QY 352 GCGGAGGAGTGGAGGTGGGTAAGAGCGCTGGGCTGGCTCGACTACCTCTACAGC 411
Db 444 GCCAAGGATACGAAGTGGTTCGATTCGGTGTGACTGTTTGGCTTATGTTTACAGC 503
QY 412 GCGCGCTGGCGACCTCCCAAGCGCGTGCCTCTCGCTCGAGAGGACTGGCCAC 471
Db 504 AGCAGAGTGAGACCGCCCTTAAGAGGTTTCTGHAATGCGAGAGCAAAATGTCGCCAC 563
QY 472 GTGCGGTGCCACCCCGCGCTTCATGCGCAGGTCTCTTCGCGCGCTCCACCTTC 531
Db 564 GTGCGTTCGCGCGCGCGTGAATTCATGTTGGAGGTTCTCTAATTTGGCTTTCATCTTC 623
QY 532 CAGTTCGCGAGCTCACCACTCTTCAGCGGCGTCTCTTGATGTCCTTGTATAGGTT 591
Db 624 AAGATCCCTGAATTAATTAATCTCTATCAGAGGCACTTATTGGAGCTTGTAGACAAAGTT 683
QY 592 GAAATAGATAACCTTCTAATGATCTTATCTGTTCCTCACTTATGCAAAATCTTGCATG 651
Db 684 GTTATAGAGGACATGTTGTTATCTCAAGCTTGCTAATATATGTTGGTAAAGCTTGTATG 743
QY 652 AAATCTGTTGAAGATGCTTGTATGTTAGTTCGGTCAAACTTGAACATGATTAATCTT 711
Db 744 AAGCTATTGGATAGATGTAAGAGATTAATGTCAGTCTAATGTAGATATGTTAGTCTT 803
QY 712 GAGAGTCAATTCCTCCAGATGTTATCAAGCAGATTAATGATGACGCTTAAGCTCGGA 771
Db 804 GAAAGTCAATTCCTCCGAGAGCTTGTAAAGAGATTAATGTAGACGCTTAAAGAGCTTGGT 863
QY 772 TTAATTTCCACAGAAACCAAGGATTTCTTAACAAACATGTGAGGAGATACACAGAGCC 831
Db 864 TTGAGGTACCTAAAGTAAG-----AAACATGCTCGAATGTACATTAAGCA 911
QY 832 CTGACTCTGAGATGTAGAGTACTGAGGATGCTGCTCACTGAAGGAGCAGACAAATCTT 891
Db 912 CTGACTCGGATGATTAATGAGTTAGTCAAGTTGCTTTTGAAGAGGATCAACCAATCTA 971
QY 892 GATGATGTTGCACTGACCTACGCGTGCAGATTTGTCAGTCTCCAAATTAACACCGAG 951
Db 972 GATGATGCTGTGCTCTTCAATTCGCTGTGATATTCGAATGTGAAGACCGCAACAGAT 1031
QY 952 CTTTGGGATCTCGACTTGCAGATGTTAATCATAGAAACCCAGAGGTTATCTGTTCTT 1011
Db 1032 CTTTAAACTGATCTTGCGATGTCAACATAGGAATCCGAGGGATATACGTTGCTT 1091
QY 1012 CACATGCTGCGAGGAGAGAGGCTAAATCAATGCTCTCTCTTTTAAACAGGGGCT 1071
Db 1092 CATGTTGCTGCGATCGGAAGGAGGCAAAATGATCTCTATTTGGAAGGAGTGA 1151
QY 1072 CGACAGCAGATGTTACATTCGATCGGAGAAAGCGTTCAATCTCAAAAGACTAACA 1131
Db 1152 AGTGATCAGAGCAACTTTGGAAGGTAGAACCGCACTCATGATCGCAAAACAGCCACT 1211
QY 1132 AAAAAGGGGATTAATTTGGGTTTACCGAAGGAGAAACCTTCTCCAAAAGATAGTTA 1191
Db 1212 ATGGCGTTGATGTAATAATATCCGAGCAATCAAGCACTCTCTCAAGGCGCACTA 1271
QY 1192 TGTATTGAATACTGAGCAAGCTGAAAGAGGAGCCCAACAACTCGGAGAGCATCAGTT 1251
Db 1272 TGTGTAGAAATCTAGAGCAAGAGCAAAACGAGAACAAATTCCTAGAGATGTTCTCTCC 1331
QY 1252 TCTCTTGCATGCGAGGTGAGAGTCTACGAGGAGGTTGCTGATCTTGAAACCGAGTT 1311
Db 1332 TCTTTTGCAGTGGCGCGCGATGAAATGAAGATGACGCTGCTCGATCTTGAATAATAGTT 1391
QY 1312 GCTTTGGCAAGGATTAATTTCCGATGGAGGCAAGTAGTAGCAATGATTTCTCTCAAGTG 1371
Db 1392 GCATCTGCTCAAGGCTTTTCCACGGAAGCACAAGCTGCAATGGAGATCGCCGAATG 1451
QY 1372 GATGAACTTTGGAATTTAACTG---GGTTCGTGGAATTCACCTCTCTGAAAGACNA 1428
Db 1452 AAGGGAACATGTGAGTTTCATAGTACTAGCCTCGAGCCTGACCGCTCTCACTGTTAGAG 1511

QY 1429 CGGCAACTGTTGATCTAAATGAAGTCTTTTCAATGAAGAAAGAACACTTAGCTCGG 1488
Db 1512 AGAATCATACCGGTGTAAGATAGACCTTTTCAATCTAGAGAGGATCAAGTAGA 1571
QY 1489 ATGACAGCACTCTCCAAAACAGTGGAGCTCGGAAAACGCTTTTCCCGCGAGTTCCGAAC 1548
Db 1572 CTAAGAGCGCTTTCTAAACCGTGGAACTCGGAAAACGATTTCTTCCCGCGCTGTTCCGCA 1631
QY 1549 GTGCTCAGCAAGATCATG-----GATGATGAACACTGATCGGTTTCCCTCGGAGAGAC 1602
Db 1632 GTGCTCAGCAGATTAATGAACCTGTGAGGACTTGAATCACTGCGGTTGCGGAGAGAGAC 1691
QY 1603 ACGTCCGCG-----GAGAGGAGGAAGAGGTTTTCATGACCTGACGAGATGTTCTTCAG 1653
Db 1692 ACTGCTGAGAAACGACTACAAAGAGCAAGGTTACATGGAATACAAGAGACACTAAAG 1751
QY 1654 AAGCATTTCACGAGGCAAGAGGAGGAATGACAGGTCGGGGCTCTGTCGTCGTGTCGCA 1713
Db 1752 AAGGCTTTTAGTGAGGACAAATTTGGAATTAGAAATTCGTCCTGACAGATTCGACTTCT 1811
QY 1714 TCGACATCGATCGGGGCGCATTCGACCAAGG 1743
Db 1812 TCCACATCGAAATCAACCGGTGGAAGAGG 1841

RESULT 8

US-09-908-323-2

; Sequence 2, Application US/09908323

; Patent No. US20020073447A1

; GENERAL INFORMATION:

; APPLICANT: Dong et al.

; TITLE OF INVENTION: ACQUIRED RESISTANCE GENES AND USES THEREOF

; NUMBER OF SEQUENCES: 28

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Clark & Elbing LLP

; STREET: 176 Federal Street

; CITY: Boston

; STATE: MA

; COUNTRY: USA

; ZIP: 02110

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Diskette

; COMPUTER: IBM Compatible

; OPERATING SYSTEM: DOS

; SOFTWARE: Fast-Seq for Windows Version 2.0

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/908,323

; FILING DATE: 17-Jul-2001

; CLASSIFICATION: <Unknown>

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/908,884

; FILING DATE: <Unknown>

; APPLICATION NUMBER: 60/035,166

; FILING DATE: January 10, 1997

; APPLICATION NUMBER: 60/046,769

; FILING DATE: May 16, 1997

; ATTORNEY/AGENT INFORMATION:

; NAME: Elbing, Karen L.

; REGISTRATION NUMBER: 35,238

; REFERENCE/DOCKET NUMBER: 00786/339004

; TELECOMMUNICATION INFORMATION:

; TELEPHONE: 617-428-0200

; TELEFAX: 617-428-7045

; INFORMATION FOR SEQ ID NO: 2:

; SEQUENCE CHARACTERISTICS:

; LENGTH: 2104 base pairs

; TYPE: nucleic acid

; STRANDEDNESS: double

; TOPOLOGY: linear

; MOLECULE TYPE: cDNA

; FEATURE:

; NAME/KEY: Coding Sequence

; LOCATION: 93...1871

OTHER INFORMATION:
SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-09-908-323-2

Query Match 20.7%; Score 422.2; DB 9; Length 2104;
Best Local Similarity 58.4%; Pred. No. 2.2e-87;
Matches 824; Conservative 0; Mismatches 556; Indels 30; Gaps 4;

QY 352 GCGAGGAGTGGAGGTGGGTACAGGGGCTGCGGCTGCTCGACTACCTCTACAGC 411
DB 444 GCCAAGGATTACGAAGTGGTTCGATTGGGTGTGACTGTTTGGCTTATGTTTACAGC 503
QY 412 GCGCGCTCGCGACCTGCCAAGCGGCTCTCTCGTGCAGAGGACTGCGCCAC 471
DB 504 AGCAGAGTGAGCCCGCTTAAGAGATTCTGAATGCGAGAGAGATTGCTGCCAC 563
QY 472 GTGCGGTGCCACCCCGCTGCGGTTCATGGCGAGGCTCTTCCGCGCTCCACCTTC 531
DB 564 GTGGCTTCCGCGCGGTGGATTTCATGTTGGAGGTTCTCTATTGGCTTTCATCTTC 623
QY 532 CAGTTCGCGAGCTCACCAACTCTTCCAGCGGCTCTCTTGATGTCCTTGATAAGTT 591
DB 624 AAGATCCCTGAATTAATTAATCTCTATCAGAGGCACTTATTGGAGGTTGTAGACAAAGTT 683
QY 592 GAAATAGATAACCTTCTATTGATCTTATCTGTGCGCACTTATGCAACAAATCTTCATG 651
DB 684 GTTATAGAGGACACATGGTTATCTCAAGCTTGCTAATATATGTTGTAAGCTTGTATG 743
QY 652 AAATGCTTGAAGATGCTTGATGTTAGTTCGGTCAAACTTTGACATGATTAATCTTT 711
DB 744 AAGCTATTGGATAGATTAAAGAGATTATTGCAAGTCTAATGTAGATATGTTAGTCTT 803
QY 712 GAGAGTCAATGCTCCAGATGTTATCAAGCAGATTATTGATGCAAGCTTAAGCTCGGA 771
DB 804 GAAAGTCAATGCGGAGAGCTTCTTAAAGAGATAATTTGATAGACGTTAAAGAGCTTGGT 863
QY 772 TTAATTTCCAGAAACCAAGGATTTCTTAACAACATGTCAGAGGATACACAGAGCC 831
DB 864 TTGAGGTACCTAAAGTAAAG-----AAACATGCTCGAATGTTACATAAGGCA 911
QY 832 CTTGACTCTGAGATGATAGCTAGTCTAGGATGCTGCTCACTGAAGGACAGACAAATCTT 891
DB 912 CTGACTCGGATGATATTGAGTTAGTCTCAAGTCTTTTGAAGAGGATCAACCAATCTA 971
QY 892 GATGATGCTTGGACTGCACTACCGCTCGAATTTGATGCTCAAAATTTACACCGAG 951
DB 972 GATGATGCTGCTCTTCAATTCGCTGTTGCAATTTGCAATGTCAGACCGCAACAGAT 1031
QY 952 CTTTGTGATCTGCACTTGCAGATGTTAATCATAGAAACCCAGAGTTTACTGTTCTT 1011
DB 1032 CTTTAAAACCTTGATCTTTGCGGATGTCACCAATAGGNAATCCGAGGGATATACGGTGT 1091
QY 1012 CACATTGCTGCGAGGGAAGAGAGCTTAAATCATTTGCTCTCTTTTAAACCAAGGGGCT 1071
DB 1092 CATGTTGCTGCGATCGGAAGAGGACCAATTTGATATCTATCTATTGGAAGAGTGA 1151
QY 1072 CGACAGCAGATGTTTACATTCGATGGGAGAAAGCGGTTCAAATCTCAAAAGACTAACA 1131
DB 1152 AGTGATCAGAAGCAACTTTGGAAGGTAGAACCGCACTCATGATCGCAAAACAAGCCACT 1211
QY 1132 AAACAGGGGATATCTTTGGGGTACCGAAGAGAAACCTTCTCCAAAGATAGGTTA 1191
DB 1212 ATGCGGTTGAATGTAATAATATCCCGGACCAATGCAAGCATCTCTCAAAAGCCGACTA 1271
QY 1192 TGATTGAAATACGAGCAAGCTCAAGAGAGGACCCACAACTCGGAGAGCATCACTT 1251
DB 1272 TGTGTAGAAATTAAGCAAGCAAGCAAAACGAGAACAAATTCCTAGAGATGTTCTCTCC 1331
QY 1252 TCTCTGCAATGGCAGGTGAGAGTCTACGAGGAGGTTGCTGTATCTTTGAAAACCGAGTT 1311
DB 1332 TCTTTTCAGTGGCGCGCGATGAATTTGAAGATGACGCTGCTCGATCTTTGAAAATAGAGTT 1391
QY 1312 GCTTTGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTG 1371

DB 1392 GCATTGCTCAACGTCTTTTCCAAACGGAAGCAAGCTGCAATGGAGATCGCCAAATG 1451
QY 1372 GATGGAACCTTTGGAATTTAACTG---GGTCTGTGTGCAAAATCCACCTCTCTGAAAGACAA 1428
DB 1452 AAGGGAACATGTGAGTTTCATAGTAGCTAGCCTCGAGCCTGACCGTCTCTCCTGGTACGAAG 1511
QY 1429 CGGCAACTGTTGATCTAAATGAAAGTCTTTTATATGAAAGAAAGAACACTTAGCTCGG 1488
DB 1512 AGAATCATCACCGGTGTAAGATAGCACTTTTCAGAAATCTTAGAAGAGCATCAAAAGTAGA 1571
QY 1489 ATGACAGCACTCTCCAAACAGTGGAGCTCGGGAACGCTTTTCCCGGATGTTGGAAC 1548
DB 1572 CTAAGAGCGCTTTCTAAACCCGTGGAACCTCGGGAACGATTTCTCCCGCTGTTTCGGCA 1631
QY 1549 GTGCTCGCAACAAGATCATG-----GATGATGAAACTGATCCGGTTTCTCTCGGAAGAGAC 1602
DB 1632 GTGCTCGACCAAGATTATGAACCTGTGAGGACTTGACTCAACTGGCTTGGGAGAGACGAC 1691
QY 1603 ACCTCCGCG-----GAGAAGAGGAAAGGTTTTCATGACCTGACGAGATGTTCTTCAG 1653
DB 1692 ACTGCTGAGAAACGACTACAAAGAAAGCAAGGTACATGGAATACAAAGAGACACTAAAG 1751
QY 1654 AAGCATTCCACGAGGACAGGAGGATGACAGGTCGGGCTCTCGTCTGCTCGCTCA 1713
DB 1752 AAGCCTTTAGTGAGGACAATTTGGAATTGGAATTCGCTCCCTGACAGATTCGACTTCT 1811
QY 1714 TCGCATCGATCGCGGCGCATTCGACCAAGG 1743
DB 1812 TCCATCGAATCAACCGGTGGAAGAGG 1841

RESULT 9

US-09-934-455-73
; Sequence 73, Application US/09934455
; Publication No. US20030121070A1
; GENERAL INFORMATION:
; APPLICANT: Adam, Luc
; APPLICANT: Creelman, Robert
; APPLICANT: Dubell, Arnold
; APPLICANT: Heard, Jacqueline
; APPLICANT: Jiang, Cai-Zhong
; APPLICANT: Keddle, James
; APPLICANT: Pilgrim, Marsha
; APPLICANT: Ratcliffe, Oliver
; APPLICANT: Reuber, Lynne
; APPLICANT: Riechmann, Jose Luis
; APPLICANT: Yu, Guo-Liang
; APPLICANT: Pineda, Onaira
; TITLE OF INVENTION: Genes for Modifying Plant Traits IV
; FILE REFERENCE: MBI-0025
; CURRENT APPLICATION NUMBER: US/09/934,455
; PRIOR FILING DATE: 2001-08-22
; PRIOR APPLICATION NUMBER: 60/227439
; PRIOR FILING DATE: 2000-08-22
; PRIOR APPLICATION NUMBER: MBI-0022
; PRIOR FILING DATE: 2001-11-16
; PRIOR APPLICATION NUMBER: MBI-0023
; PRIOR FILING DATE: 2001-04-17
; NUMBER OF SEQ ID NOS: 516
; SOFTWARE: Patent in version 3.1
; SEQ ID NO 73
; LENGTH: 2104
; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (93)..(1874)
; OTHER INFORMATION: G278
US-09-934-455-73

Query Match 20.7%; Score 422.2; DB 11; Length 2104;
Best Local Similarity 58.4%; Pred. No. 2.2e-87;

Matches 824; Conservative 0; Mismatches 556; Indels 30; Gaps 4;

QY 352 GCGAGAGGTGGAGGTGGGTACGAGGGCTGGCTGGCTCGACTACTCTACAGC 411
Db 444 GCCAAGGATTACGAAGTGGTTTCGATTCGGTGTGACTGTTTGGCTTATGTTTACAGC 503
QY 412 GCGCGGTGGCGACCTGCCAAGCGGGTGGCTCTGGCTCGAGGAGCTGGCCAC 471
Db 504 AGCAGAGTGAGACCGCGCTTAAGAGGTTCTGHAATGCGAGACGAGAAATGCTGCCAC 563
QY 472 GTGCGGTGCCACCGCGCTGGCTTCATGGCGAGGTCTCTTCGCGCTTCACACTTC 531
Db 564 GTGCGTTCGCGCGCGGTGGATTTCATGTTGGAGGTTCTCTATTGGCTTTCATCTTC 623
QY 532 CAGTTCGCGAGCTCACCAACTCTTCAGCGGGCTCTCTTGATGTCCTTGATAGGTT 591
Db 624 AAGATCCCTGAATTAATTAATCTCTATCAGAGGCACTTATTGGAGGTTGTAGACAAAGTT 683
QY 592 GAAGTAGATACCTTCTATTGATCTTAATCTGTTGCCAACTTATGCAAAATCTTGCAATG 651
Db 684 GTTATAGAGGACACATGTTGTTATCTCAAGCTTGTATATATGTTGGTAAAGCTTGTATG 743
QY 652 AAATGCTTTGAAGATGCTTCATATGTTAGTTCGGTCAAACTTTGACATGATTAATCTTT 711
Db 744 AAGCTATTGGATAGATGTAAGAGATTATGTCAGTCTAATGTAGATATGTTAGTCTT 803
QY 712 GAGAGTCAATTCCTCCAGATGTTATCAAGCAAGTATTATGATGACGCTTAGCTCGGA 771
Db 804 GAAAGTCAATTCGCGAAGAGCTTGTAAAGAGATAATTTGATAGACGTTAAAGAGCTTGGT 863
QY 772 TTAATTTCCACGAGAAACCAAGGATTTCCTAACAAACATGTGAGGAGATACACAGAGCC 831
Db 864 TTGGAGGTACCTAAAGTAAG-----AAACATGCTCGAATGTACATAGGCA 911
QY 832 CTTGACTCTGACGATGTAGCTAGTACGATGCTGCTCACTGAAGGACAGACAAATCTT 891
Db 912 CTTGACTCGGATGATATTGAGTTAGTCAAGTTGCTTTTGAAGAGGATCACACCAATCTA 971
QY 892 GATGATGCTTTGCACTGCACTACGCGCTGCAACATTTGTAATCCAAATTTACACCCAG 951
Db 972 GATGATGCTGTGCTCTTCAATTCGCTGTGATATTGCAATGTGAAGACCGCAACAGAT 1031
QY 952 CTTTGTGGATCTCGACTTCAGATGTTAATCATAGAAACCAAGAGGTTATATCTGTTCT 1011
Db 1032 CTTTAAACCTTGATCTTCCGATGTCAACATAGGAATCCGAGGGATATACGTGCTT 1091
QY 1012 CACATTTGCTCGAGGCGAAGAGAGCCTAAATCATTTGCTCCCTTTTAAACCAAGGGCT 1071
Db 1092 CATGTTGCTGCGATCGGAAGGAGCCACAATTTGATATCTCTATTGGAAGAGGTGCA 1151
QY 1072 CGACCGAGAGATTTACATTCGATGGGAGAAAGCGGTTCATATCTCAAAAGACTAACA 1131
Db 1152 AGTGCATCAGAGCAACTTTGGAAGGTAGAACCGCACTCATGATCGCAAAACCAAGCCACT 1211
QY 1132 AAACAAGGGGATTACTTTGGGTTTACCGAAGAGGAAACCTTCTCCAAAGATAGGTTA 1191
Db 1212 ATGCGGTTGAATGATTAATATCCCGAGCAATGCAAGCATCTCTCAAGCGCGACTA 1271
QY 1192 TGTAATGAATATCTGGAGCAAGCTGAAAGAGGAGCCCAACAACTCGGAGAGCATCAGTT 1251
Db 1272 TGTGTAGAATACTAGAGCAAGAGACAAACGAGAACAAATTTCTTAGAGATGTTCTCC 1331
QY 1252 TCTCTTGAATGGCAGGTAGAGTCTACGAGNAGGTTGCTGTATCTTGAACCGAGTT 1311
Db 1332 TCTTTTGCAGTGGCGCCGATGAATTTGAAGATGACGCTGCTCGATCTTGAATAATAGATT 1391
QY 1312 GCTTTTGGCAAGGATTAATGTTTCGATGGAGGCAAGAGTAGCAATGATATGCTCAAGTG 1371
Db 1392 GCATTTGCTCAAGCTTTTTCACGAGGAGACACAGCTGCAATGGAGATCCCGAATG 1451
QY 1372 GATGGAATTTGGAATTTAACCTG---GGTTCTGTGGCAAAATCCACCTCTCGAAGACAA 1428
Db 1452 AAGGGAACATGTGAGTTTCATAGTACTAGCTCGAGCTGACCGTCTCACTGATCGAAG 1511

QY 1429 CGGACAACTGTTGATCTAAATGAAAGTCCCTTTTATAATGAAAGAAACACTTAGCTCGG 1488
Db 1512 AGAATCATACCGGTGTAAAGATAGACCTTTTCAATCTTAGAAGAGCATCAAGTAGA 1571
QY 1489 ATGACAGCACTCTCCAAAACAGATGAGCTCGGAAACCGCTTTTCCCGCGATGTCGAAC 1548
Db 1572 CTAAAGCGCTTTCTAAACCGTGGAACTCGGAAACGATTTCTTCCCGCGCTGTTCCGCA 1631
QY 1549 GTGCTCGAAGATCATG-----GATGATGAATGATCGGTTTCCCTCGGAAGAGAC 1602
Db 1632 GTGCTCGACCAAGATTGAATGTGAGGACTTGACTCAACTGGCTTCGGGAGAAAGAC 1691
QY 1603 ACGTCCCG-----GAGAAGAGGAAGGTTTCATGACCTGCAGGATGTTCTTCAG 1653
Db 1692 ACTCTGAGAAACGACTACAAAGAGCAAGGTACATGGAATACAGACACTAAAG 1751
QY 1654 AAGCATTTCACGAGCAAGAGGAGGAATGACAGGTGCGGGCTCTCGTCTGCTGTCPCA 1713
Db 1752 AAGCCTTTAGTGAGGACAATTTGGAATTAGAAATTCGTCCTGACAGATTCGACTTCT 1811
QY 1714 TCGACATCGATCGGGGCGCATTCGACCAAGG 1743
Db 1812 TCCACATCGAATCAACCGGTGGAAGAGG 1841

RESULT 10

US-10-225-068-241
; Sequence 241, Application US/10225068
; Publication No. US20030217383A1
; GENERAL INFORMATION:
; APPLICANT: Mendel Biotechnology, Inc.
; APPLICANT: Reuber, T. Lynne
; APPLICANT: Riechmann, Jose Luis
; APPLICANT: Heard, Jacqueline E.
; APPLICANT: Jiang, Cai-Zhong
; APPLICANT: Adam, Luc J.
; APPLICANT: Dubell, Arnold T.
; APPLICANT: Ratcliffe, Oliver
; APPLICANT: Pineda, Omaira
; APPLICANT: Yu, Guo-Liang
; APPLICANT: Broun, Pierre E.
; TITLE OF INVENTION: STRESS-RELATED POLYNUCLEOTIDES AND
; FILE REFERENCE: 514442002040
; CURRENT APPLICATION NUMBER: US/10/225,068
; CURRENT FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 60/310,847
; PRIOR FILING DATE: 2001-08-09
; PRIOR APPLICATION NUMBER: 60/336,049
; PRIOR FILING DATE: 2001-11-19
; PRIOR APPLICATION NUMBER: 60/338,692
; PRIOR FILING DATE: 2001-12-11
; PRIOR APPLICATION NUMBER: 10/171,468
; PRIOR FILING DATE: 2002-06-14
; NUMBER OF SEQ ID NOS: 246
; SOFTWARE: RastSeq for Windows Version 4.0
; SEQ ID NO 241
; LENGTH: 2104
; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (93)...(1874)
US-10-225-068-241

Query Match 20.7%; Score 422.2; DB 12; Length 2104;
Best Local Similarity 58.4%; Pred. No. 2.2e-87;
Matches 824; Conservative 0; Mismatches 556; Indels 30; Gaps 4;

QY 352 GCGAGGAGGTGGAGGTGGGTACGAGGCGCTGGCTGGCTCGACTACTCTACAGC 411
Db 444 GCCAAGGATTACGAAGTGGTTTCGATTCGGTGTGACTGTTTGGCTTATGTTTACAGC 503


```

; LOCATION: (196)...(196)
; OTHER INFORMATION: Xaa is either Asn or Ile
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: (242)...(242)
; OTHER INFORMATION: Xaa is either Asp or Asn
US-10-328-675A-5

Query Match      18.7%; Score 381.8; DB 12; Length 1740;
Best Local Similarity 58.4%; Pred. No. 4.4e-78;
Matches 812; Conservative 3; Mismatches 510; Indels 66; Gaps 6;

QY 351 CGCGAGGAGTGGAGGTGGGTACGAGCGCTCGCGGTGGTGTCTGACTACCTCTACAG 410
DB 345 CGCGGCGAATACGACGCTCGGTTCGATTCGTGTGGCTGTCTTGGCGTACGTTACAG 404
QY 411 CGCGCGCTGCGGACCTGCCAAGCGCGCTCTCGCTGCGAGGAGTGGCGCCA 470
DB 405 CGCGAGAGTGGAGCGCGCTCCGAAGGAGTTTCTGAATGCGGAGACGAGCTGTGCA 464
QY 471 CGTGGGTGCCACCCCGCGCTCGCTTCATGCGCAGGTCTCTTTCGCGGCTCCACCTT 530
DB 465 CGTGGCTGCGCTCGCGCTGGAATTCATGTGGAGGTTCTCTACTTGGCTTTCGCTT 524
QY 531 CGAGGTGCGCGAGCTCACCACTCTTCAGCGGCTCTCTTGTATGTCCTTGTATAGGT 590
DB 525 CCAGATTACGAACTGGTTTACCATTGTATCAGAGGATTTTACTGGAATGTTGTAGACAAAGT 584
QY 591 TGAAGTAGATACTTCTATTGATCTTCTGTGCAACTTATGCAACAAATCTTGCAT 650
DB 585 TAWCATAGAAGACATTTGGTGTCTCAAGCTTGCTACATCTGCGGTAAAGCGTGCA 644
QY 651 GAAACTGCTGAAAGATGCTTATATGTTAGTTCGGTCAAACTTGATGATGATCTCT 710
DB 645 GAAGCTATTTCGATAAGTGAGAGAGATCATTTGCAAGTCTAAGTGTGATGTTGTTACTCT 704
QY 711 TGGAAGTCAATTCCTCCAGATGTTATCAAGCAGATTATTGATGACCGCTAAGCTCGG 770
DB 705 AAAGAAAGTCAATTCCTCGAGACATTCGCAAGCAAGTAATCGATATCCGCAAAAGCTCGG 764
QY 771 ATTAATTTACCAAGAAACAAAGGATTTCTTCAAAACATGTGAGGAGGATACACAGAGC 830
DB 765 CTTGAGGTAGCTGAA-----CCAGAAACATGCTCCAAACATACACAAAGC 812
QY 831 CTTGACTCTGACGATGTAGAGTGTAGTGTGCTGTCTGCTGCTGCTGCTGCTGCTGCT 890
DB 813 GCTTGAAGTACAGAGTCTTGACCTTGTGCTGTATGCTTTTGAAGAGGCGCACACGAACT 872
QY 891 TGATGATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 950
DB 873 AGACGAAGCGTATGCTCTCAATTTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 932
QY 951 GCTTTTGGATCTGCGACTTGCAGATGTTATATCAAGAAACCCCAAGAGGTTATCTGTTCT 1010
DB 933 TCTCTTGAAGTCTGGGTTTTCGAGTGTCAACCGGAGAAACCCGAGAGGTTACACGTAAT 992
QY 1011 TCACATGCTGCGAGGCGAAGAGAGCTCAAAATCATTTGCTTCTTCAACCAAGGCGC 1070
DB 993 TCACGTGCTGCGATGAGGAAAGAGCGACACTGATAGCAATTTGTTGACGAAAGGGGC 1052
QY 1071 TCGACAGCAGATGTTTACATTCGATGGGAGAAAGCGTTCAAAATCTCAAAAAGACTAAC 1130
DB 1053 TAATGCAATTAGAAATGCTTTTGGACGGGAGAACTGCTGTTGATCGGAAACAAAGTCAC 1112
QY 1131 AAAACAAGGGAATTTCTTGGGTTACCGAAGAGGAAACCTTCTCCAAAGATAGGTT 1190
DB 1113 TA---AGCGGCGGAGTGTGTTATTTCTGGAGAAAGGAAAGTTAGTGTCCAAAGCGGAGT 1169
QY 1191 ATGTATTGAATATCTGAGCAAGCTGAAAGAA---GGGACCCCAACCTCGGAGAGCATC 1247
DB 1170 ATGTGTAGAGATCTCAAGCAACACAGACACACACAGGAAACCTTTCTGAAAGATGTTTC 1229
QY 1248 AGTTTCTCTTGCATGGCAGGTGAGAGTCTACAGGAAGGTTGCTGTATCTTGAACACCG 1307

```

```

RESULT 12
US-10-328-675A-19
; Sequence 19, Application US/10328675A
; Publication No. US2003015917A1
; GENERAL INFORMATION:
; APPLICANT: Salmemon, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: 30857USNPDIV1
; CURRENT APPLICATION NUMBER: US/10/328,675A
; CURRENT FILING DATE: 2002-12-23
; PRIOR APPLICATION NUMBER: 09/519,232
; PRIOR FILING DATE: 2000-03-06
; PRIOR APPLICATION NUMBER: 60/219,338
; PRIOR FILING DATE: 1999-03-09
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patent in Ver. 2.1
; SEQ ID NO 19
; LENGTH: 1803
; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(1803)
; OTHER INFORMATION: AtNMLC4-2 genomic sequence
US-10-328-675A-19

Query Match      18.6%; Score 380.4; DB 12; Length 1803;
Best Local Similarity 57.4%; Pred. No. 9.4e-78;
Matches 778; Conservative 0; Mismatches 551; Indels 27; Gaps 4;

QY 351 CGCGAGGAGTGGAGGTGGGTACGAGCGCTCGCGGTGGTGTCTGACTACCTCTACAG 410
DB 348 CGCCAGAGATACGAAGTTCGGCTTTGACTCGGTTTGGCGGTTTGGCGGTATGTTTACAG 407
QY 411 CGCGCGCTGCGGCGACCTGCCCAAGCGCGTCTCTGCTGCGAGGACTGCGGCCCA 470

```

```
Db 408 CGCAGAGTGAAGTCCCGCGGAGAGCTTCTGCTTGGCTAGACGAGATGTTGCA 467
Qy 471 CGTGGGTGCCACCCCGCGTGGCTTCATGGCGAGGTCTCTTCGCGGCTCCACCTT 530
Db 468 GGTGGCTTGGCGGTCAAGAGTGGATTTTCATGGTGGAGGTCTTTATCTGTCTTGGT 527
Qy 531 CCAGGTGCCGAGCTCACCAACCTCTCCAGGGGCTCTCTTGATGCTCTTGATAAGGT 590
Db 528 CCAGATTCAAGAAATAGTACTCTGTATGAGAGGCGAGTTCTTGGAAATGTAGACAAAGT 587
Qy 591 TGAAGTAGATAAACCCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGAT 650
Db 588 TGTAGTCGAGACATCTTGGTTATATTCAAGCTTGATCTATGTGTACAACTATCAA 647
Qy 651 GAAACTGCTTGAAGATCCCTTGATGATGATGTCGGGTCAACCTTGACATGATTTACTCT 710
Db 648 GAAGCTTTGGATAGATGCATAGAAATTTATCGTGAAGTCTGATATAGAACTAGTTAGTCT 707
Qy 711 TGAGAGTCATGCTCCAGATGTTATCAAGCAGATTTATGATGACGACCCCTAAGCCTCGG 770
Db 708 TGAGAGTCTTTACCTCAACATTTTCAAGCAATCTATAGACATFCCGCGAAGCGCTCTG 767
Qy 771 ATTAATTTCCACAGAAACAGAGGATTTCTTAACAAACATGTGAGGAGTACACAGAGC 830
Db 768 TCTAGAGCCACTAA-----CTGAAAGGCGATGTCAAGAACATATACAAGGC 815
Qy 831 CTTGACTCTGACGATGTAGAGTGTAGTCAAGTGTCTCACTGAAGGACAGACAAATCT 890
Db 816 GCTAGACTCAGATGTTGAGCTGTCAAGATGCTTTGTAGAGGACACACCAATCT 875
Qy 891 TGATGATCGTGTGACGTACGCTACGCGGTGAAACATTTGACTCCAAAATTAACACGA 950
Db 876 CGATGAGCGTATGCTCTTCACTTTTGTCTATCGCTCACTCGCTGTGAAGACCGGTATGA 935
Qy 951 GCTTTTGATCTCGACCTGCGAGTGTAAATCATAGAACCCAGAGGTATCTGTTCT 1010
Db 936 TCTCTCGAGCTTGAGCTTGGGATGTTAACTTAGAAATCCGAGGGGATACACTGTCT 995
Qy 1011 TCACATTTCTCGAGGCGAAGAGAGCTTAAATCATTTGCTCCCTTTTAAACAAGGGGCG 1070
Db 996 TCATGTTCTCGGATCGGAGGAGCGGAGTGTATATCTTTGTTAATGAAGGGGCG 1055
Qy 1071 TCGACGACGAGATTTAATTGATGGGAGAAAGCGGTTCAATCTCAAAAAGACTAAC 1130
Db 1056 AAATATTTTAGACACAACTTGGATGGTGAACCGCTTTAGTGTATGTAAACGACTCAC 1115
Qy 1131 AAAACAAGGGATTTACTTTGGGTTTACGAGAGAGAAACCTTCTCCAAAGATAGGTT 1190
Db 1116 TAAAGCGGATGACTACAAAACCTAGTACGAGGAGCGGTACGCTTCTCTGAAGGCGGAT 1175
Qy 1191 ATGTATTGAATACCTGGAGCAAGCTGAAAGAGGG--ACCCACAACCTCGAGAGGATC 1247
Db 1176 ATGCATAGAGTACTTGAAGCATGAACAAAACCTAGAAATTTGTGCGCTATAGAGGCTTC 1235
Qy 1248 AGTTCTCTTCAATGGCAGGTGAGAGTCTACGAGGAAGTGTGTTGTTCTTGAAGCCG 1307
Db 1236 ACTTCTCTTCCAGTAACTCCAGAGGAGTGTAGGATGAGTGTCTCTATTATGAAGACG 1295
Qy 1308 AGTTGCTTTGGCAGGATTTGTTCCGATGGAGGCAAGATGAGCAATGGATTTGCTCA 1367
Db 1296 AGTTGCACTTGTCTGACTTCTTTTCCAGTGGAAACTGAACTGATACAGGGGTATGGCAA 1355
Qy 1368 AGTGGATGGAATTTGGAAATTTA---ACCTGGGTTCTGTGCAAAATCCACCTCTCGAAAG 1424
Db 1356 ATGGAGAAACATCGAGATTTACAGCTTCTAGTCTCGAGCTGATCATCATTTGGTGA 1415
Qy 1425 ACAACGGACAACTGTGTATCTAAATGAAAGTCTTTTCATATGAAGAGAACACTTAGC 1484
Db 1416 AAAGCGGACATCACTAGACCTAAATATGCGCGGTTCCAAATCCATGAGAGCAATTTGAG 1475
Qy 1485 TCGGATGACAGCACTCTCAAAAACAGTGGAGCTCGGGAAACGCTTTTCCCGCGATGTT 1544
```

```
Db 1476 TAGACTAAGAGCACTTTGTAACCGTGGAACTCGGGAAACGCTACTTCAACGATGTT 1535
Qy 1545 GAACTGCTCGAAGATCATGGATGATGAACCTGATCCGGTTTCCCTCGGAAGAGACAC 1604
Db 1536 GCTTGATCACCTTTATGGATCTAGAGGACTTGAATCATCTCTCTAGCGTAGAAGAATAC 1595
Qy 1605 GTCCGCG-----GAGAAGAGAGAGGTTTTCATGACCTGCAGGATGTTCTTCAGAA 1655
Db 1596 TCCTGAGAAACGGCTACAAAGAAAGCAAGGTATACATGAACCTACAAGAGACTCTGATGAA 1655
Qy 1656 GGCATTCCACGAGGACAAAGGAGGAGGAATGACAGGTC 1691
Db 1656 GACCTTTAGTGAGGACAAAGGAGGAATGTGGAAAGTC 1691
```

RESULT 13

```
US-10-328-675A-71
; Sequence 71, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: 308570USNPDIV1
; CURRENT APPLICATION NUMBER: US/10/328,675A
; PRIOR FILING DATE: 2002-12-23
; PRIOR APPLICATION NUMBER: 09/519,232
; PRIOR FILING DATE: 2000-03-06
; PRIOR APPLICATION NUMBER: 60/219,338
; PRIOR FILING DATE: 1999-03-09
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: Patent In Ver. 2.1
; SEQ ID NO 71
; LENGTH: 1818
; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (13)..(1818)
; OTHER INFORMATION: AtNMLc4-2 cDNA sequence
US-10-328-675A-71
```

Query Match 18.6%; Score 380.4; DB 12; Length 1818;

Best Local Similarity 57.4%; Pred. No. 9.4e-78;

Matches 778; Conservative 0; Mismatches 551; Indels 27; Gaps 4;

```
Qy 351 CGGCGAGAGGTGAGGTGCGGTACGAGGCGCTCGGCTGGCTGCTGCTACCTCTACAG 410
Db 363 CGCCAGAGATTACGAAAGTCGGCTTTGACTCGGTTGTGGCGGTTTGGCGTATGTTTACAG 422
Qy 411 CGGCGCGTCCGCGACCTGCCCAAGGCGGCTGCTCTGCTCGACGAGGACTGCGCCCA 470
Db 423 CGGCGAGATGAGGTCCCGCGCAAGGAGGCTTCTGCTTGGTAGACGAGGATTTGGCA 482
Qy 471 CGTGGGTGCCACCCCGCGCTGCGGTTTCATGGCGAGGCTCTCTTTCGCGGCTCCACCTT 530
Db 483 GGTGGCTTGGCGGTCAAAAGTGGATTTTCATGGTGGAGGTTCTTTATCTGTCTTTCGTTT 542
Qy 531 CCAGGTGCCGAGCTACCAACCTCTTCCAGCGGCTCTCTTGTATGCTGCTGATAAGGT 590
Db 543 CCAGATTCAAGAAATAGTACTCTGTATGAGGAGGAGTCTTGGAAATTTAGACAAAGT 602
Qy 591 TGAAGTAGATAAACCCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGAT 650
Db 603 TGTAGTCGAGACATCTTGGTTATATTCAAGCTTGATCTCTATGTGTACACATACAA 662
Qy 651 GAAACTGCTTGAAGATGCTTGTATGATGAGTCCGGTCAAAACCTTGACATGATTTACTCT 710
Db 663 GAAGCTTTGGATAGATGATAGAAATTTATCGTGAAGTCTGATATAGAACTAGTTAGTCT 722
Qy 711 TGAGAGTCAATTGCTCTCAGATGTTATCAAGCAAGTATTATGATGCAAGCTTAAGCTCTCG 770
```

Db 723 TGAGAGTCTTTACCTCAACATTTTCAAGCAATCATAGACATCCCGAGCGCTCTG 782
Qy 771 ATTAATTTTACCAGAAAAAAGGATTTCTTAACAAAATGTGAGGAGATACACAGAGC 830
Db 783 TCTAGAGCCACCTAAA-----CTAGAAAGGCATGTCAAGAACATATACAGGC 830
Qy 831 CTTGACTCTGACGATGTAGACTAGTCTGAGTCTGAGTCTGCTCACTGAGGACAGCAAAATCT 890
Db 831 GCTAGACTCAGATGTGTGAGCTTGTCAAGATGCTTTGTGAGGAGACACACCAATCT 890
Qy 891 TGATCATGCTTTGACCTGACCTACGCGCTCGAAATGTGACTCCAAAATTTACAAACGA 950
Db 891 CGATGAGGCTATGCTCTTCATTTTGTCTATCGCTCACTGCGCTGTGAAGCGCGTATGA 950
Qy 951 GCTTTTGGATCTGCACTGTGAGATGTTTAATCATAGAAACCAAGAGGTTTATCTGTTCT 1010
Db 951 TCTCTCGAGCTTGAGCTTGCGATGTTAACTTAGAAATCCGAGGGATACACTGTGCT 1010
Qy 1011 TCACATTTGCTGCGAGCGAAGAGCGCTTAAATCATTTCTCCCTTTTAAACCAAGGGGCG 1070
Db 1011 TCATGTTGCTGCGATGCGGAGGAGCGGAGTTGATAATATCTTTGTTAAATGAAGGGCG 1070
Qy 1071 TCGACAGCAGATGTTACATTCGATGGGAGAAAGCGGTTCAAATCTCAAAAAGACTAAC 1130
Db 1071 AAATATTTAGACACAACTTGATGTTAGAACCGCTTTAGTGAATGTAAACGACTCAC 1130
Qy 1131 AAAACAAGGGATTACTTTGGGGTTACCGAAGAGAAACCTTCTCCAAAGATAGGTT 1190
Db 1131 TAAAGCGGATGACTCAAAATAGTACGAGGAGCGTACGCTTCTCTGAAAGCGGAT 1190
Qy 1191 ATGTTTGAATTAAGTGGACAGCTGCAAGAGG---ACCCACAACCTCGGAGAGCATC 1247
Db 1191 ATGCATAGAGGACTTGACATGAAACAAATATTTGTGCGCTATAGAGCTTC 1250
Qy 1248 AGTTTCTCTTGAATGGCAGGTGAGAGTCTACGAGGAGAGTTGCTGTATCTTGAACCG 1307
Db 1251 ACTTCTCTTCAGTAATCCAGAGGAGTTGAGGATGAGTTGCTCTTATATGAACCG 1310
Qy 1308 AGTTGCTTTGGCAAGATTAATGTTCCGATGAGGCAAGAGTAGCAATGAGATTTGCTCA 1367
Db 1311 AGTTGCACTTTGCTCGACTTCTCTTCCAGTGGAACTGAAACTGTACAGGGTATTTGCCAA 1370
Qy 1368 AGTGGATGAATCTTTGGAATTTA---ACCTGGCTTCTGTCGAAATCCACCTCTGAAAG 1424
Db 1371 ATTGGAGGAAATGCGAGTTTACAGCTTCTAGTCTGAGCTGATCATCATTTGGTGA 1430
Qy 1425 ACAACGCAACTGTTTGAATCAATGAAAGTCTTTTCAATATGAAGAGAGAACTTACG 1484
Db 1431 AAAGCGGACATCACTAGACCTTAAATATGCGCGCTTCCAAATCCATGAGAAGCATTTGAG 1490
Qy 1485 TCGGATGACAGCACTCTCCAAACAGTGGAGCTCGGGAACCGTTTTTCCCGGATGTTTC 1544
Db 1491 TAGACTTAAGAGCACTTTGTAACCCGTGGAACCTGGGGAACCGTACTTCAAAACGATGTTTC 1550
Qy 1545 GAACGTGCTCGAAGATCATGATGATGAATGAACTGATCGGTTTCCCTCGGAAGAGACAC 1604
Db 1551 GCTTGTATCACTTTATGATCTGAGGACTTGAATCATCTTGTAGGCTGAAGAGATAC 1610
Qy 1605 GTCCGCG-----GAGAAGAGGAGAGGTTTCAATGACCTGCGAGGATGTTCTTCAGAA 1655
Db 1611 TCTTGAGAAACGGCTACAAAGAGCAAAAGTACATGGAACATCAAGAGACTCTGATGAA 1670
Qy 1656 GGCAITTCAGAGGACAAAGAGAGAGATGACAGGTC 1691
Db 1671 GACCTTTAGTGAGGACAAAGGAGGAATGTGGAAGTC 1706

RESULT 14

US-09-934-455-433
; Sequence 433, Application US/09934455
; Publication No. US20030121070A1
; GENERAL INFORMATION:
; APPLICANT: Adam, Luc

; APPLICANT: Creelman, Robert
; APPLICANT: Dubell, Arnold
; APPLICANT: Heard, Jacqueline
; APPLICANT: Jiang, Cai-Zhong
; APPLICANT: Keddle, James
; APPLICANT: Pilgrim, Marsha
; APPLICANT: Ratcliffe, Oliver
; APPLICANT: Reuber, Lynne
; APPLICANT: Riechmann, Jose Luis
; APPLICANT: Yu, Guo-Liang
; APPLICANT: Pineda, Omaira
; TITLE OF INVENTION: Genes for Modifying Plant Traits IV
; FILE REFERENCE: MBI-0025
; CURRENT APPLICATION NUMBER: US/09/934,455
; CURRENT FILING DATE: 2001-08-22
; PRIOR FILING DATE: 2000-08-22
; PRIOR APPLICATION NUMBER: MBI-0022
; PRIOR FILING DATE: 2001-11-16
; PRIOR APPLICATION NUMBER: MBI-0023
; PRIOR FILING DATE: 2001-04-17
; NUMBER OF SEQ ID NOS: 516
; SOFTWARE: Patent in version 3.1
; SEQ ID NO 433
; LENGTH: 2083
; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (54)..(1859)
; OTHER INFORMATION: G1290
US-09-934-455-433

Query Match 18.6%; Score 380.4; DB 11; Length 2083;

Best Local Similarity 57.4%; Pred. No. 9.9e-78;
Matches 778; Conservative 0; Mismatches 551; Indels 27; Gaps 4;

Qy 351 CGGCGAGAGGTGAGGTCGGGTACGAGGCGCTCGGGTGGTCTCGACTACCTCTACAG 410
Db 404 CGCAGAGATTACAGAGTCGCTTGTACTCGTTGTGGCGTTTGGCGTATGTTACAG 463
Qy 411 CGGCGCGGTGCGGCACTGCGCAAGGCGGCGTCTGCTGCGACGAGGACTGGCGCCA 470
Db 464 CGGCGAGTGAAGTCCCGCGGAGGAGGCTTCTGCTTGGCTAGACGAGATTGTTGCCA 523
Qy 471 CGTGGGTGCGACCCCGCGCTCGGTTTCATGCGCAGGTCCTCTTCCGCGCTCCACCTT 530
Db 524 CGTGGCTTGGCGGTCAAAGGTGGATTTTCATGTTGAGGTTCTTTATCTGTTCTTCTT 583
Qy 531 CCAGTCCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGAAGGT 590
Db 584 CCAGATTCAAGATTAGTTACTCTGTATGAGGAGGAGTCTTGGAAATTTGTAGACAAAGT 643
Qy 591 TGAAGTAGATAACCTTCTTATGATCTTATCTGTTGGCAACTTATGCAACAATCTTGAT 650
Db 644 TGTAGTCGAGACATCTTGGTTATATTCAAGCTTGATCTCTATGTTGTTGTAACAATACAA 703
Qy 651 GAACTGCTTGAAGATGCTTGTATGTTAGTTCGCTCGGTCAACCTTGAATGATGATCTCT 710
Db 704 GAACTGTTGATAGATGATAGAAATTTATCGTGAAGTCTGATATAGAACTAGTTAGTCT 763
Qy 711 TGAGAAAGTCATTTGCTCCAGATGTTTATCAAGCAGATTTATGATGACGCGCTTAAGCTCG 770
Db 764 TGAGAAAGTCTTTACCTCAACATTTTCAAGCAATCATAGACATCCCGAAGCGCTCTG 823
Qy 771 ATTAATTTCAACAGAAACAGGGGATTTCTTAAACAACATGTGAGGAGGATACAGAGC 830
Db 824 TCTAGAGCCACCTAAA-----CTAGAAAGGCATGTCAAGAACATATACAAAGC 871
Qy 831 CTTTCACTCTGACGATGTAGAGCTAGTCTAGGATGCTGCTCACTGAAGGACAGACAAATCT 890
Db 872 GCTAGACTCAGATGATGTTGAGCTTGTCAAGATGCTTTTGTAGAGGAGGACACCAATCT 931

Qy	891	TGATGATGCGTTTGCATCTGCACCTACGCCGTGGAAACATTGTGATCTCCAAAATTACAACCGA	950
Db	932	CGATGAGCGGTATGCTCTTCACTTTGTATCGCTCACTGCGCTGTGAAGACCGCGTATGA	991
Qy	951	GCCTTTGGATCTCGCACTTCGCAGATGTTAATCATAGAAAACCAAGAGGTTATACTGTTCT	1010
Db	992	TCCTCTCGAGCTTGAGCTTGGGATGTTAACCTTAGAATCCGAGGGGATACACTGTGCT	1051
Qy	1011	TCACATTTCTCGAGGCGAAGAGAGCGCTAAATCATTTGTCTCCCTTTTAAACCAAGGGGGC	1070
Db	1052	TCATGTTGCTTCGATGCGAAGGAGCGCAAGTTGATAATATCTTTGTTAATGAAGAGGGC	1111
Qy	1071	TCGACCAGCAGATGTTACATTCGATGGAGAAAACCGGTTCAATCTCAAAAGACTTAAC	1130
Db	1112	AAATATTTTAGACACAACATTTGGATGTGAGACCGCTTTAGTGAATGTNAACGCACTCAC	1171
Qy	1131	AAAAAAGGGGATTACTTTGGGTTACCGAAGAAAGAAAACCTTCTCCAAAAGATAGGTT	1190
Db	1172	TAAAGCGATGACTACAAAACCTAGTACGGAGGACGGTACGGCTTCTCTGAAGCGCGATT	1231
Qy	1191	ATGTAATTGAAATACTCGAGCAAGCTGAAAGAGGG---ACCCACAACTCGGAGAAAGCATC	1247
Db	1232	ATGCATAGAGGTACTTTCGAGCATGAACAAAACCTAGAAATATTGTGCGCTATAGAGGCTTC	1291
Qy	1248	AGTTTCTCTTGCATGCGAGGTGAGACTACGAGGAAGGTTGCTGTATCTTGAANAACCG	1307
Db	1292	ACTTTCTCTCCAGTAACCTCAGAGGAGTTGAGGATGAGGTGCTCTATTATGAANAACCG	1351
Qy	1308	AGTTGCTTTGGCAAGGATTAATGTTTCCGATGGAGGCAAGAGTAGTACCAATGGATATTGCTCA	1367
Db	1352	AGTTGCACTTGTCTCGACTTCTTTCCAGTGGAAACTGAAACGTACAGGGTATTGCCAA	1411
Qy	1368	AGTGGATGGAACHTTTGGAATTTA---ACCTGGGTTCTGGTGCAAAATCCACTCTCTGAAG	1424
Db	1412	ATTGGAGGAACATCGCAGTTTACAGCTTCTAGTCTCGAGCCTGATCATCACATTTGTGA	1471
Qy	1425	ACAAAGCAACAACCTTTCATCTAAATGAAGTCTCTTCAATGAAGAAGAACCACTTTAGC	1484
Db	1472	AAAGCGGACATCACTAGACCTTAATATGGCGCGTTCCAATCATGAGAAGCAATTTGAG	1531
Qy	1485	TCGGATGACAGCACTCTCCAAAACAGTGGAGCTCGGAAAACGCTTTTCCCGCGATGTC	1544
Db	1532	TAGACTAAGAGCACTTTGTAAACCGTGGAACTGGGGAAACGCTACTTCAACCGATGTC	1591
Qy	1545	GAACGTGCTCGACNAGATCATGGNATGATGAACCTGATCCGGTTTCCCTCGAAGAGACAC	1604
Db	1592	GCTTTGATCACTTTATGGATATCTGAGGACTTTGAATCATCTTGTCTAGCGTAGAAGAATAC	1651
Qy	1605	GTCGCGC-----GAGAAGAGGAAGAGGTTTTCATGACCTGCAGAGATGTTCTTCAGAA	1655
Db	1652	TCCTGAAGAAACGGCTACAAAAGAAGCAAGGTATACGAACTACAGAGACTCTGATGAA	1711
Qy	1656	GGCAATCCACGAGCAAGGAGGAGAAATGACAGGTC	1691
Db	1712	GACCTTTAGTGAGCAAGGAGGAATGTGGAAGTC	1747

RESULT 15

```

RES001.13
US/10-328-675A-45
; Sequence 45, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
; APPLICANT: Salmemon, John
; APPLICANT: Weisio, Laura
; APPLICANT: Willits, Michael
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: 30857USNPDI1
; CURRENT APPLICATION NUMBER: US/10/328,675A
; CURRENT FILING DATE: 2002-12-23
; PRIOR APPLICATION NUMBER: 09/519,232
; PRIOR FILING DATE: 2000-03-06
; PRIOR APPLICATION NUMBER: 60/219,338
; PRIOR FILING DATE: 1999-03-09

```

```

; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 45
; LENGTH: 653
; TYPE: DNA
; ORGANISM: Solanum tuberosum
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(651)
; OTHER INFORMATION: Potato A
; FEATURE:
; NAME/KEY: Misc Feature
; LOCATION: (1)..(1)
; OTHER INFORMATION: Xaa is either Glu or Asp
; FEATURE:
; NAME/KEY: Misc Feature
; LOCATION: (215)..(215)
; OTHER INFORMATION: Xaa is Leu
; US-10-328-675A-45

```

Query Match	17.6%	Score 359.8;	DB 12;	Length 653;
Best Local Similarity	72.0%	Pred. No. 3.8e-73;		
Matches	466;	Conservative	2;	Mismatches 179; Indels 0; Gaps 0;
Qy	673	GATATGGTAGTCCGGTC	AAACCTTGACATGATTTACTCTTGAGAGATCATTTGCCCTCCAGAT	732
Db	1	GAKATTATTGTCAAGTCT	TAATGTTGATATCATAAACCTTGTATAAGTTCCTTGCCCTCATGAC	60
Qy	733	GTATTCAAGCAGATTTAT	TGATGCAACGCTTAAGCCTCGGATTAATTTTACACAGAAAAACAAG	792
Db	61	ATCGTAAACAATCACTG	ATTCACGCTGTAACCTTGCTTACAGGGCCTGAAGCAAT	120
Qy	793	GGATTTCTTAACAAACAT	GTGAGGAGGATACACAGAGCCCTTGAATCTGACGATGTAGAG	852
Db	121	GGTTTTCTGATAAACAT	TGTTAAGAGGATACATAGGGCATTTGGACTCTGATGATGTGAG	180
Qy	853	CTAGTCAGGATGCTGCT	CACTGAAAGACACAGACAAATCTTGATGATGCGTTTGACATGCGAC	912
Db	181	TTACTAAGGATGTTGCT	TAAAGAAAGGCACTACTCTCGATGATGCATGCTCTCCAC	240
Qy	913	TAGCCGCTGCAACATTT	GTGACTCTCAAAATTTACAAACCGAGCTTTTGGATCTCGACATTTGCA	972
Db	241	TATGCTGTGATATTTG	CGATGCAAGACATCAAGCAGAACTTTTAGATCTTTCACCTTGCT	300
Qy	973	GATGTTAATCATAGAAAC	CCCAAGAGTGTACTGTTCTTTCACATTTCTCGAGGCGCAAGA	1032
Db	301	GATGTTAATCATCAAAAT	CCTAGAGGATACACGGTACTTCACTGCTGCCATGAGGAAA	360
Qy	1033	GAGCCTAAATCATTTGT	CTCCCTTTTAAACAAGGGGGCTCGACACAGAGATTTACATTC	1092
Db	361	GAGCCTAAATTTATAGT	GTCCCTTTTAAACAAAGGAGCTAGACCTTCTGATCTGACATCT	420
Qy	1093	GATGGAGAAAGCGGTT	CCAAATCTCAAAAGACTAAACAACAGGGGATTTACTTTGGG	1152
Db	421	GATGGCAAAAAGACAT	CTCAAAATTTGTAAAGGCTCACTAGGCTTGTGGATTTTACTAAG	480
Qy	1153	GTTATCCGAAGAGGAAA	ACCTCTCCAAAGATAGGTTATGATTGAAATACTGGAGCAA	1212
Db	481	TCTACAGAGAGGAANA	TCTGCTCCAAAGATCGGTTATGCATTGAGATTTCTGGAGCAA	540
Qy	1213	GCTGAAAGAGGGACCC	CAACACTCGGAGAGCATCAGTTTCTCTTCAATGGCAGGTGAG	1272
Db	541	GCAGAAAGAGAGATCC	ACTACTAGGAGAGCTTCAATTATCTCTTCTATGGCAGCGCAT	600
Qy	1273	AGTCTACGAGGAAGT	TGCTGTATCTTTGAAAACCGAGTTGCTTTTGGC	1319
Db	601	GATTTGCGTATGAAGCT	GTTATACCTTTGAAATTCGAGTTGGCCTKGC	647

Search completed: December 7, 2003, 02:34:42
Job time : 642 secs

Result No.	Score	Query		Length	DB	ID	Description
		Match	✦				
1	590.2	28.9	1731	4	US-09-519-232-3		Sequence 3, Appli
2	563.4	27.6	1767	4	US-09-519-232-1		Sequence 1, Appli
3	562	27.5	2296	4	US-09-519-232-63		Sequence 63, Appli
4	420.6	20.6	2011	2	US-08-989-478-6		Sequence 6, Appli
5	420.6	20.6	2011	2	US-08-989-478-7		Sequence 7, Appli
6	420.6	20.6	2011	3	US-08-996-685-6		Sequence 6, Appli
7	420.6	20.6	2011	3	US-08-996-685-7		Sequence 7, Appli
8	411.8	20.2	1608	2	US-08-989-478-11		Sequence 11, Appli
9	411.8	20.2	1608	3	US-08-996-685-11		Sequence 11, Appli
10	409.2	20.1	1597	2	US-08-989-478-9		Sequence 9, Appli
11	409.2	20.1	1597	3	US-08-996-685-9		Sequence 9, Appli
12	400.4	19.6	1194	2	US-08-989-478-13		Sequence 13, Appli
13	400.4	19.6	1194	3	US-08-996-685-13		Sequence 13, Appli
14	381.8	18.7	1740	4	US-09-519-232-5		Sequence 5, Appli
15	380.4	18.6	1803	4	US-09-519-232-19		Sequence 19, Appli
16	380.4	18.6	1818	4	US-09-519-232-71		Sequence 71, Appli
17	359.8	17.6	653	4	US-09-519-232-45		Sequence 45, Appli
18	344.2	16.9	659	4	US-09-519-232-29		Sequence 29, Appli
19	315.8	15.5	1428	4	US-09-569-804-1		Sequence 1, Appli
20	315.8	15.5	2368	4	US-09-569-804-2		Sequence 2, Appli
21	311.8	15.3	2154	4	US-09-551-778-1		Sequence 1, Appli
22	311.4	15.3	2673	4	US-09-519-232-73		Sequence 73, Appli
23	309.8	15.2	1830	4	US-09-569-804-6		Sequence 6, Appli
24	309.8	15.2	2120	4	US-09-569-804-8		Sequence 8, Appli
25	306.2	15.0	1824	4	US-09-569-804-5		Sequence 5, Appli
26	306.2	15.0	2420	4	US-09-569-804-7		Sequence 7, Appli
27	277	13.6	2498	4	US-09-519-232-37		Sequence 37, Appli

Db 608 TACTTTCAAGATGCTGATGATATTTGTCAGCTAAATGTTGATATCATAAACCTTGATA 667
QY 716 AGTCATTGCTCGATGTTATCAAGCAGATTTATGATGCAGCCTAAGCCTCGGATTAA 775
Db 668 AGTCCTTGCTCATGACATTTGAAACAAATCAGTGATTCAGCTGCTGAACCTTGCTGCG 727
QY 776 TTTTCCAGCAAAACAGGAGTTTCTTAACAAACATGTGAGGAGGATACACAGAGCCTTG 835
Db 728 AAGGGCTGAAGCANTGTTTCTGATACACATGTTAAGAGGATACATAGAGCATTGG 787
QY 836 ACTCTGACGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 895
Db 788 ACTCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 847
QY 896 ATGCGTTTGCATGCTAGCGCTGCAACATGTGACTCCAAATTTACAAACCGAGCTTT 955
Db 848 ATGCATATGCTCTCCACTATGCTGTAGCATATTTGCGATGCAAGACTACAGCAGACTTT 907
QY 956 TGGATCTGCGACTTGCAGATGTTAATCATAGAAACCAAGAGGTTATCTGTTCTTACA 1015
Db 908 TAGATCTTTCACCTGCTGATGTTAATCATCAAAATCTTAGAGGACACAGGTTCTATG 967
QY 1016 TTGCTGAGGCGAAGAGAGCTTAAATCATGTTCTCCCTTTTAAACAGGGGCTCGAC 1075
Db 968 TTGCTGCGATGAGGAAAGAACCTTAAATTTATAGTGTCCCTTTTAAACAAAGGAGCTAG 1027
QY 1076 CAGCAGATGTTACATTCGATGGGAGAAAGCGGTTCAAAATCTCAAAAGACTAAACAAAC 1135
Db 1028 CTTCTGATCTGATCTCGATGCGAAAGACCTTCAAAATGCTAGAGGCTCAGTAGGC 1087
QY 1136 AAGGGGATTACTTTGGGGTTTACCGAAGAGGAAACCTTCTTCCAAAGATAGGTTATGTA 1195
Db 1088 TTGTAGATTTTACCAAGTCTACAGAGGAAAGAAATCTGCTCCAAAGGATCGGTTATGCA 1147
QY 1196 TTGAATACTGAGAGCAGCTGAAAGAGGACCCCAACCTCGAGAGGATCAGTTTCTC 1255
Db 1148 TTGAGATTTCTGAGCAGCAGAAAGAGATCCACTACTAGAGAGGCTTCAATATCTC 1207
QY 1256 TTGCAATGGCAGGTGAGAGTCTACGAGGAGGTTGCTGTATCTTGAACCGAGTTGCTT 1315
Db 1208 TTGCTATGGCAGGCGATGATTTGCGTATGAGCTGTTATACCTTGAATAGAGTTGGTC 1267
QY 1316 TGGCAAGGATATGTTTCCGATGGAGGAGAGATGAGATGAGATGATGATGATGATGATG 1375
Db 1268 TGGCTAACTCTCTTTTCCATGGAAGCAAAAGTTGCAATGAGATTTGCAACAGTTGATG 1327
QY 1376 GAACTTTGGAAATTAACCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 1435
Db 1328 GCAGCTGTAATTAACCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 1387
QY 1436 CTGTTGATCTAAATGAAAGCTTTTCAATGAAAGAAAGAACTTAGCTGCGATGACAG 1495
Db 1388 CAGTGGATTTGAACAGGCTCTTTCAAGATGAAAGAGGAGCACTTGAATCGGCTTAGGG 1447
QY 1496 CACTCTCCAAACAGTGGAGCTCGGAAACGCTTTTCCCGGATGTTCCAAAGCTGCTCG 1555
Db 1448 CTCTCTCTAGAACTGTGAACTTGGAAACCGGTTCTTTTCCACGTTGTTCAAGAGTTCTAA 1507
QY 1556 ACAGATCATGATGATGA-----AACTGATCGGTTTCCCTCGGAAGAGACACGCTCG 1609
Db 1508 ATAAGATCATGGATGCTGATGATGATGATGATGATGATGATGATGATGATGATGATG 1567
QY 1610 CGGA-----GAAGAGGAGAGGTTTCAATGACCTGCGAGGATGTTTCTTCAAGAGGCAT 1660
Db 1568 AAGAGCGTCAACTGAAGAGCAAGGATACATGGAACCTTCAAGAAATTTTGTCTAAAGCAT 1627
QY 1661 TCCAGGAGGACAAAGAGGAGATGACAGGCTCGGGCTCTCGTGGTCTGCTGCTGCTGCTG 1720
Db 1628 TCACGGAGGATAAAGAGAAATTTGCTAAGACTAATGCTCTATCTTGTCTCTACAT 1687
QY 1721 CGATCGGGG 1729

Db 1688 CTAAGGGAG 1696
RESULT 2
US-09-519-232-1
; Sequence 1, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTF2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 1767
; TYPE: DNA
; ORGANISM: Nicotiana tabacum
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(1764)
; OTHER INFORMATION: Full length tobacco cDNA sequence
US-09-519-232-1
Query Match 27.6%; Score 563.4; DB 4; Length 1767;
Best Local Similarity 64.3%; Pred. No. 2.e-112;
Matches 884; Conservative 0; Mismatches 476; Indels 15; Gaps 2;
QY 356 AGGAGGTGGAGGTGGGTACGAGGCGCTGCGGTGCTCGACTACCTCTACAGCGGCC 415
Db 341 AAGAGCATGAGGTGAGCTATGATGCTGAATGAGTGTATTGGCTTATTGTATAGTGA 400
QY 416 GCGTCGGCGAGCTGCCCAAGCGGCGTGCCTCTGCTCGAGGAGACTGCGCCACGTCG 475
Db 401 AAGTTAGGCTTCACTAAAGATGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTG 460
QY 476 GGTGCCACCCCGCTCGCTTCAGTGGCGAGGTCCTCTCGCGCGCTCCACCTCCAGG 535
Db 461 CTGTAGGCGAGCTGCGCAATTCCTGTTGAGGTTTGTACACATCATTTACCTTTTCA 520
QY 536 TCGCGAGCTCACCAACCTCTCCAGCGCGTCTCTTGTGATGCTCTGATAGGTTGAAG 595
Db 521 TCTCTGAATGTTGACAAAGTTTACAGACACCTACTGATATTTTTCACAAACTGCGAG 580
QY 596 TAGATAAACCTTCTATTGATCTTATCTGTTGCCAATTTATGCAACAAATCTTGCATGAA 655
Db 581 CAGACGATGTAATGATGTTTATCTGTTGCAACATTTGTGTTAAAGCATCGAGAGAT 640
QY 656 TGCCTGAAGATGCTTGTGATGTTAGTCCGTCGCTCAAACTTGCACATGATTACTCTTGAGA 715
Db 641 TGCCTTCAAGCTGCAATGAGATTTATGCAAGTCTAAATGTTGATATCATACCTTTGATA 700
QY 716 AGTCATTGCTCCAGATGTTATCAAGCAGATTTATGATGACGCTTAAAGCCTCGGATTAA 775
Db 701 AAGCCTTGGCTCATGACATTTGAAACAAATTTACTGATTCAGCGGGAACCTTGTCTAC 760
QY 776 TTTTACCAGAAACAGGAGATTTCCCTTAAACAAATGTTGAGGAGGATACACAGAGCCTTG 835
Db 761 AAGGGCCTGAAAGCAACGGTTTTTCTGATAAAACATGTTAAGAGGATACATAGGGCAAT 820
QY 836 ACTCTGACATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTTGATG 895
Db 821 ATTCTGATGATGTTGAATTTACTACAAATGTTGCTAAGAGGGGATATACCTTAGATG 880
QY 896 ATGCGTTTGCATGCTAGCTAGCGCTGCAACATTTGTGACTCCAAATTTAAACCGAGCTTT 955
Db 881 ATGCATATGCTCTCCATTTATGCTGATGCTGATGCTGATGCTGATGCTGATGCTGATG 940
QY 956 TGGATCTCGACTTGCAGATGTTAATCATAGAAACCAAGAGGTTTATCTGTTCTTCA 1015

Db 941 TAGATCTTGCACCTTCTGATATTAATCATCAAAATTCAGGGGATACACGGTCTGCATG 1000
Qy 1016 TTGCTCGGAGGCGAAGAGAGCTTAAATCATTTGCTCCCTTTTAAACCAAGGGGCTCGAC 1075
Db 1001 TTGCAGCCATGAGGAAGAGCCTAAATTTGAGTGTCCCTTTTAAACCAAGGAGCTAGAC 1060
Qy 1076 CAGCAGATCTTACATTCGATGGAGAAAGCGGTTCAAATCTCAAAAGACTAAACAAAC 1135
Db 1061 CTTCTGATCTGACATCCGATGGAAGAAAGCACTTCAAATCCCAAGAGGCTCACTAGGC 1120
Qy 1136 AAGGGGATTAATTTGGGGTTACCGAAGAAAGAAACCTTCTCAAAAGATAGTTATGTA 1195
Db 1121 TTGTGGATTTAGTAGTCTCGGAGGAAGAAATCTGCTCGAATGATCGGTTATGCA 1180
Qy 1196 TTGAATATCTGAGCAAGCTGAAAGAGGACCCCAACTCGGAGGAAGCATCAGTTTCTC 1255
Db 1181 TTGAGATTTCTGAGCAAGCAGAAAGAGAGACCTCTGCTAGGAGAAGCTTCTGTATCTC 1240
Qy 1256 TTGCAATGCGAGGTGAGCTTACGAGGAAGGTTGCTGTATCTTGAACCGAGTTGCTT 1315
Db 1241 TTGCTATGCGAGCGGATGATTTGCGGTAAGAAGCTGTTATACCTTGAATAATAGAGTTGGCC 1300
Qy 1316 TGGCAAGGATTAATTTCCGATGGAGGCAAGAGTAGCAATGATATGCTCAAGTGGATG 1375
Db 1301 TGGCTAACTCTTTTCCAAATGGAAGCTAAAGTTGCAATGGAATGCTCAAGTTGATG 1360
Qy 1376 GAACTTTGGAATTTAACTTGGGTTCTGTTGCAATCCACTCTCGAAGCAACCGACAA 1435
Db 1361 GCACCTCTGAGTTCCACCTGGCTAGCATCGGCAAAAGATGCTAATGACAGAGACAA 1420
Qy 1436 CTGTTGATCTAAATGAAAGTCTTTCAATGAAAGAGAAACACTTATGCTCGGATGACAG 1495
Db 1421 CAGTAGATTTGAACGAGGCTCTTTTCAAGATAAAGAGAGGACCTTGAATCGGCTTAGAG 1480
Qy 1496 CACTCTCCAAAACAGTGGAGCTCGGAAACGCTTTTCCCGCGATGTTTCAAGAGTCTCG 1555
Db 1481 CACTCTCTAGAACTGTAGAACTTGGAAACGCTTTCTTCCAGTTGTTTCAAGAGTTCTAA 1540
Qy 1556 ACAAGATCATGGATGATGA- -----AACTGATCCGGTTTCCCTCGGAAGAGACAGTCCG 1609
Db 1541 ATAAGATCATGATGCTGATGACTTGTCTGAGATAGCTTACATGGGAATGATACGGCAG 1600
Qy 1610 CGGA- -----GAAGAGAGAGGTTTCATGACCTGAGGATGTTTTCAGAGAGGAT 1660
Db 1601 AAGAGCGTCAACTGAAGAGAAAGGTACATGGAACCTTCAAGAAATTTCTGACTAAAGCAT 1660
Qy 1661 TCCAGCAGGACAAGGAGGAGATGACAGGTCGGGGCTCTCGTCGTCGTCATC 1715
Db 1661 TCACTGAGGATAAAGAAATATGATAGACTAACAAACATCTCCTCATCTTGTTC 1715

RESULT 3

US-09-519-232-63
; Sequence 63, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmemon, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTP2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 63
; LENGTH: 2296
; TYPE: DNA
; ORGANISM: Beta vulgaris
; FEATURE:
; NAME/KEY: CDS

; LOCATION: (113)...(1927)
; OTHER INFORMATION: full-length Sugarbeet cDNA sequence
US-09-519-232-63

Query Match 27.5%; Score 562; DB 4; Length 2296;
Best Local Similarity 61.2%; Pred No. 4,9e-112; Indels 39; Gaps 5;
Matches 1014; Conservative 0; Mismatches 605;

Qy 86 CCGAGCTGGAGCGCTCCGCGCTCTCCGCAACCTCCGCGCGGTTTCGCTCGCCCG 145
Db 261 CGAGCGCGCGCTCTTCCGCGCTCTCTGAAACCTCGACTCGCTTTTCCAACCTCGC 320
Qy 146 AGGACTTCGCGTTCCTCGCGAGCGCGGATCGCGTCCGCGCGCGCGCGCGGG 205
Db 321 TTTCTCTCTCGACTCCGACTCTTTTCGCGGAGCTTAAATCTGCTGTTCCGCTGATTCG 380
Qy 206 GCGACTTCGGGTGACCGCTCGCTGCTCTCCGCGGAGCGCCCTTCTGCGCGGCTCT 265
Db 381 GTGAAGTTCGCGTTCATCGGTGTCTCTCTGCTCGGAGCTCGTTCTTTCGGTCCGCTT 440
Qy 266 TCGCGCGCGCGCGCGCTCCGCGAGCGCGCGGAGGATGGCAGCAGAGGCTGG 325
Db 441 TTGCTT-----CGAAACGAGAGAGAGAGAGGATAAAGAGAGAGTGGTG 490
Qy 326 AGCTCCGGAGGCTCTCTCGCGCGCGCGGAGGAGGTGAGGTACGAGGCGCTGC 385
Db 491 AAGCTTGAG-----CTTAAGGATTTAGCTGGTGAATTTTGGAGGTTGATTTGATTCGGTTG 545
Qy 386 GCGTGTCTCGACTACCTCTACAGCGCGCGCTCGGCGACCTGCCCAAGCGCGCTGCC 445
Db 546 TTGCGGTTTATGTTTATAGTGGCAAGTTAGGAAATTTGCTTAGAGAAATTTGTG 605
Qy 446 TCTGCTCGACGAGGACTCGCGCCACGTCGGGTGCAACCCCGCGCTCGGCTTCATGGCGC 505
Db 606 TTGTGTTGATGAGGATTTGCTCTCATGAAGCTTGTGCTCTGCTGTTTGTGTTG 665
Qy 506 AGGTCTCTTCGCGCGCTCCACTTTCAGGTCGCGGAGCTACCAACCTCTTCCAGCGCG 565
Db 666 AGGTTCTCTATTTGTCTCACAATTCGAGATTTGCGAATTTGCTTTTCGCTTTATCAGAGGC 725
Qy 566 GTCTCTTGTGCTCTGATAAGGTTGAAGTAGATAACCTTCTTATGATCTTATCTGTG 625
Db 726 ACCTACTGATATTTCTGACAGATTTGCCAGATGACGTTCTAGTAGTTTATCTGTG 785
Qy 626 CCAACTTATGCAACAAATCTTTCATGAACTGCTTTGAAAGATGCTTGTATGTTAGTCC 685
Db 786 CTGAGATGTGGAAATGCGGTGTGACGATTTGCTGGCAAGGTGTTATGCAAGATTGTA 845
Qy 686 GGTCAACCTTGACATGATTTACTCTTGAAGAGTCAATGCTCCAGATGTTTATCAAGCAGA 745
Db 846 GGTCCGATTTGACGTAAACCACTTGAATAAATCTTCCGCGAGAAATGTTGTGAACACA 905
Qy 746 TTTATGATGACGCTTAAGCTCGGATTAATTTTCCACAGAAACCAAGGATTTCTTAACA 805
Db 906 TAATCGACACGCAAGAGAACTTGGGTTTACTGAACTTGGGCGTGTGAGTTTCTGTATA 965
Qy 806 AACATGTGAGGAGATACACAGAGCCCTTGTACTCTGACGATGTAGAGCTAGTCAGATGC 865
Db 966 AGCATGTGAAGAGATACACAGAGCTTTGGAAATCCGATGATGATAGTTAGTCAGAAATGC 1025
Qy 866 TGCTCACTGAAGGAGCAGACAAATCTTGTATGATGCGTTTGGACATGCACTACGCGCGTCAAC 925
Db 1026 TTTTAAAGAGCGCCATCAACTCTAGATGATGATATGATATGCTTCACTTATGCTGGCAC 1085
Qy 926 ATTGTGACTCCAAATTAACACCGAGCTTTTGGATCTCGCACTTGCAGATGTTATCATATA 985
Db 1086 ATTGTGATGCCAAGACCAACCGAGCTTCTTGAAGCTTGGGCTTGCAGATGTTAATCTTA 1145
Qy 986 GAAACCCAGAGGTTTATCTGTTTCTTCAATTTGCTGCGAGGCGAAGAGAGAGCTTAAATCA 1045
Db 1146 GAAATCTAAGGGGTCACTGCTGCTACATGTGGGAGCCATGAGAAAGAGAGCTTAAGATA 1205
Qy 1046 TTGCTCCCTTTTAAACCAAGGGGCTCGACAGCAGATGTTTACATTCGATGGGAGAAAG 1105

Db 694 AAGCTATTGGATAGATGTAAGAGGATTATTGTCAAGTCTAATGTAGATATGTTAGTCTT 753
QY 712 GAGAGTCAATTCCTCCAGATGTTATCAAGCAGATATTGTATGTCAGCCCTAAGCCTCGGA 771
Db 754 GAAAGTCAATTCGCGAAGAGCTTGTAAAGAGATAATGTATAGAGCTGAAGAGCTTGT 813
QY 772 TTAATTTTACCAGAAACCAAGGATTTCCTAACAACATGTGAGGAGATACACAGACC 831
Db 814 TTGGAGGTACCTAAAGTAAG-----AAACATGTCTCGAATGTACATAGGCA 861
QY 832 CTGACTCTGACGATGTAGAGCTAGTCAAGATGCTCTCACTGAAGGAGCAGACAAATCTT 891
Db 862 CTGACTCGGATGATATTGAGTTAGTCAAGTTGCTTTGAAAGAGGATCACACCAATCTA 921
QY 892 GATGATCGTTTGCAGTCACTACGCGTCGAACTTTGATGCTCAAAATTCACACCGAG 951
Db 922 GATGATCGTGTGCTCTTCAATTCGCTGTGATATTGCAATGTGAAGACCGCAACAGAT 981
QY 952 CTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAGAGGTTATATCTTCTT 1011
Db 982 CTTTTAAACTTGATCTTGCCGATGTCAACCATAGGAATCCGAGGGGATATACGGTGT 1041
QY 1012 CACATTGCTCGAGGCGAAGAGGCTTAAATCATTTGCTCTCTCTTTAAACCAAGGGGCT 1071
Db 1042 CATGTTGCTCGATCGGAAGAGGCCACAAATTGATATCTTATTTGAAAAGGTGCA 1101
QY 1072 CGACAGCAGATGTTACATTCGATGGGAGAAAGCGTTTCAAACTCTCAAAAGACTAACA 1131
Db 1102 AGTGATCAGAAACCACTTTGAAGGTAGAACCGCACTCATGATCGCAAAACAAGCCACT 1161
QY 1132 AAACAAGGGGATTACTTTGGGTTTACCGAAGAGGAAACCTTCTCCAAAGATAGTTA 1191
Db 1162 ATGGCGGTGAATGTAATAATATCCGGAGCAATGCAAGCATTTCTCAAGGGCGGACTA 1221
QY 1192 TGTATTGAAATACCTGAGCAAGCTGAAGAAGGGACCCCAACTCGGAGAAGCATCAGTT 1251
Db 1222 TGTGTAGAAATACCTAGACAGAAAGCAACAAACGAGAACAAATTCCTAGAGATGTTCTCC 1281
QY 1252 TCTCTTGAATGGCAGGTGAGAGTCTACGAGGAAGTTGCTGTATCTTTGAAAACCGAGTT 1311
Db 1282 TCTTTTGCAGTGGCGCGCATGAAATTGAAGATGACGCTGCTCGATCTTTGAAAATAGATT 1341
QY 1312 GCTTTGGCAAGATTATGTTCCGATGGGCAAGTAGAGCAATGATGATTTGCTCAAGTG 1371
Db 1342 GCACTTGCTCAACGTCTTTTCCAGGAAAGCACAAGCTGCAATGGAGATCGCCGAATG 1401
QY 1372 GATGAACTTTGGAATTTAACTG---GGTTCTGTGCAAAATCCCACTCTCTGAAAGACAA 1428
Db 1402 AAGGCAACATGTGAGTTCTAGTACTAGCTCGAGCTGACCGTCTCACTGGTAGGAG 1461
QY 1429 CGGCAACTGTTGATCTAAATGAAGTCTTTTATATGAAGAAAGAACACTTAGCTCGG 1488
Db 1462 AGAACATCACCGGTGTAAGATAGCACCTTTTCAAGATCCTAGAAGAGCATCAAGTAGA 1521
QY 1489 ATGACAGCACTCTCAAAACAGTGAAGCTCGGAAACGCTTTTCCCGGATGTTGGAAC 1548
Db 1522 CTAAGAGCGCTTTTAAACCGTGAAGCTCGGAAACGATTTCTCCCGCTGTTTCGCA 1581
QY 1549 GTGCTCGCAAGATCATG-----GATGATGAACCTGATCGGTTTCTCTCGAAGAGAC 1602
Db 1582 GTGCTCGACAGATTATGAATGTGAGACTTGACTCACTGCTGCGGAGAGAGAC 1641
QY 1603 ACGTCCCG-----GAGNAGAGGAGGTTTTCATGACCTGCAGGATGTTCTTCAG 1653
Db 1642 ACTGTGAGAACGACTCAAAAGAGCAAGGTATACATGGAATACAAAGAGACACTAAG 1701
QY 1654 AAGGCAATTCACGAGGACAGAGAGATGACAGGTGGGCTCTCGTGTGCTGCTCA 1713
Db 1702 AAGGCTTTAGTGAGGACAAATTTGGAATTTGGAATTTGCTCCCTGACAGATTCGACTTCT 1761
QY 1714 TCGACATCGATCGGGGCGGCTTTCGACCAAGG 1743
Db 1762 TCCACATCGAATCAACCGGTGGAAGAGG 1791

RESULT 5
US-08-989-478-7
; Sequence 7, Application US/08989478
; Patent No. 5986082
; GENERAL INFORMATION:
; APPLICANT: Uknes, Scott
; APPLICANT: Hunt, Michelle
; APPLICANT: Steiner, Henry-York
; APPLICANT: Ryals, John
; TITLE OF INVENTION: ALTERED FORMS OF THE NIM1 GENE CONFERRING
; TITLE OF INVENTION: DISEASE RESISTANCE IN PLANTS
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: No. 5986082artis Corporation
; STREET: 3054 Cornwallis Road
; CITY: Research Triangle Park
; STATE: No. 5986082th Carolina
; COUNTRY: USA
; ZIP: 27709
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/989,478
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/033,177
; FILING DATE: 13-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,379
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,382
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,730
; FILING DATE: 10-JAN-1997
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/035,021
; FILING DATE: 10-JAN-1997
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/035,022
; FILING DATE: 10-JAN-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Meigs, J. Timothy
; REGISTRATION NUMBER: 38,241
; REFERENCE/DOCKET NUMBER: PF/5-21214/P1/CGC1911
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (919) 541-8587
; TELEFAX: (919) 541-8689
; INFORMATION FOR SEQ ID NO: 7:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2011 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: CDNA
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 43..1824
; OTHER INFORMATION: /product= "altered form of NIM1"
; OTHER INFORMATION: /note= "Serine residues at amino acid positions 55 and 59 in
; OTHER INFORMATION: wild-type NIM1 gene product have been changed to Alanine
; OTHER INFORMATION: residues."
; FEATURE:
; NAME/KEY: misc feature
; LOCATION: 205..217
; OTHER INFORMATION: /note= "nucleotides 205 and 217

OTHER INFORMATION: changed from T's to G's compared to wild-type sequence.
US-08-989-478-7

Query Match	20.6%;	Score 420.6;	DB 2;	Length 2011;
Best Local Similarity	58.4%;	Pred. No. 1.4e-81;		
Matches 823;	Conservative 0;	Mismatches 557;	Indels 30;	Gaps 4;
QY	352	GGCGAGGAGGTGGAGGTGGGTTACGAGGCGCTGCGGCTGGTGGCTCGACTACCTCTACAGC	411	
DB	394	GCCAAAGGATTACGAAGTCGGTTTCGATTGGGTGTGACTGTTTGGCTTATGTTTACAGC	453	
QY	412	GGCGGCTGGCGACCTGCCAAGCGCGCTCCCTCTGCTCGAGGAGACTGGCCAC	471	
DB	454	AGCAGAGTGAGACCGCGCTAAAGAGTTTCTGAATGCGCAGACGAAATGCTGCCAC	513	
QY	472	GTGCGGTGCCACCCCGCGCTGCGTTTCATGGCGAGGTCCTCTTCGCGCCTCCACCTTC	531	
DB	514	GTGGCTTGGCGCGCGGTGATTTCAATGTTGGAGGTCTCTATTGGCTTTCACTTC	573	
QY	532	CAGGTGCGCGAGCTCACCAACCTCTCCAGCGGCGTCTCTTGATGTCTCTGATAGGTT	591	
DB	574	AGATCCCTGAATTAATTAATCTCTATCAGAGGCACTTATTGAGCGTTGTAGACAAAGTT	633	
QY	592	GAAGTAGATAACCTTCTATGATCTTATCTGTGCCAATCTATGCAACAAATCTTGATG	651	
DB	634	GTTATAGAGACACATTTGTTTACTCAAGCTTGTCTAATATGTTGGTAAAGCTTGTATG	693	
QY	652	AAACTGCTGAAGATGCTTGTATGTTAGTGGGTCAAACTTGCATGATTAATCTCTT	711	
DB	694	AACTATTGGATAGATGTAAGAGATTAATGTCAGCTTAATGATAGATATGTTAGTCTT	753	
QY	712	GAGAAGTCAATGCTCCAGATGTTTCAAGCAATTAATGATGTCAGCCTTAAGCTCGA	771	
DB	754	GAAGATCAATGCGGAAGAGCTTGTAAAGAGATAATTCATAGACGTAAGAGCTTGT	813	
QY	772	TTAATTTCCAGCAAAACAGGATTTCTTAAACAAATGTTGAGGAGGATACACAGCC	831	
DB	814	TTGAGGATCACTAAAGTAAG-----AAACATGCTCGAATGTACATAAGCA	861	
QY	832	CTTGACTCTCAGCATGTAGAGCTAGTCAGGATCTGCTCACTGAAGGACAGCAATCTT	891	
DB	862	CTTGACTCGGATGATATGAGTTAGTCAAGTCTTTTGAAGAGGATCACCAATCTA	921	
QY	892	GATGATCGGTTTGCATGCTAGCCTGCAATGCTGACTTCAAAATTAACACCGAG	951	
DB	922	GATGATCGGTGCTCTCTTCTTCTGTTGCTATTTGCAATGTGAAGCCGCAACAGAT	981	
QY	952	CTTTTGGATCTCGCATTGCGATGTTTAAATCATAGAAACCCAAAGAGTTTACTGTTCTT	1011	
DB	982	CTTTTAAACTTGATCTTGGCATGTCAACCATAGGAAATCCGAGGGGATATACGGTCTT	1041	
QY	1012	CACATTTGCTGCGAGCGAAGAGACCTTAAATCATTTGCTCCCTTTTAAACAGGGGCT	1071	
DB	1042	CATGTTGCTGCGATGCGGAAGGAGCCCAATTTGATCTATCTATTGGAAGAGTGCA	1101	
QY	1072	CGACAGCAGATGTTTACATTCGATGGGAGAAAGCGGTTCAAAATCTCAAAAAGACTAACA	1131	
DB	1102	AGTGATCAGAAAGCAACTTTTGAAGGTAGAACCGCACTCATGATCGCAAAACAGCCACT	1161	
QY	1132	AAACAAGGGGATTAATTTGGGGTTTACCGAAGAGGAAACCTTCTCCAAAGATAGGTTA	1191	
DB	1162	ATGGCGGTTGAATGTAATTAATATCCCGAGAGCAATGCAAGCATCTCTCAAGGCCGACTA	1221	
QY	1192	TGATTTGAAATTAATCTGGACCAAGCTGAAAGAGGAGCCCAAACTCGGAGAGCATAGTT	1251	
DB	1222	TGTGTAGAAATCTAGACCAAGAGACAAACAGAAACAAATTCCTAGAGATGTTCTCTCC	1281	
QY	1252	TCTCTTGAATGGCAGGTGAGAGTCTACAGGAGGTTGCTGATCTTGAACCCGAGTT	1311	
DB	1282	TCTTTTGCAGTGGCGGCGGATGAATTTGAAGATGACGCTGCTCGATCTTGAANAATAGATT	1341	
QY	1312	GCTTTTGGCAAGGATTAATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTG	1371	

RESULT 6

US-08-996-685-6
; Sequence 6, Application US/08996685
; Patent No. 6031153
; GENERAL INFORMATION:
; APPLICANT: Ryals, John
; APPLICANT: Friedrich, Leslie
; APPLICANT: Ukenes, Scott
; APPLICANT: Molina, Antonio
; APPLICANT: Rues, Wilhelm
; APPLICANT: Knauf-Belter, Gertrude
; APPLICANT: Kung, Ruth
; APPLICANT: Kessmann, Helmut
; APPLICANT: Oostendorp, Michael
; TITLE OF INVENTION: METHOD FOR PROTECTING PLANTS
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: No. 6031153artis Corporation
; STREET: 3054 Cornwallis Road
; CITY: Research Triangle Park
; STATE: No. 6031153th Carolina
; COUNTRY: USA
; ZIP: 27709
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/996,685
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/761,543
; FILING DATE: 6-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,378
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,379
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:

DB	1342	GCACTTGCTCAAGCTCTTTTCCAAAGGAGCACAAGCTGCAATGGAGATCGCCGAAATG	1401
QY	1372	GATGGAACCTTTGGAATTTAACTG---GGTCTGTGTGCAAAATCCACTCTCTGAAAGACAA	1428
DB	1402	AAGGGAACATGTGAGTTGATGAGTACGCTCGAGCCTGACCGTCTCTACTGTGACGAAG	1461
QY	1429	CGGACAACTGCTTATGATTAATGAAAGTCCCTTTCATAATGAAAGAAACAACTTGTGCTCGG	1488
DB	1462	AGAACATCACCGGTGTAAAGATAGCACCTTTTCAAGATCTGAAAGAGCATCAAGATAGA	1521
QY	1489	ATGACAGCATCTCCAAAACAGTGGAGCTCGGAAACGCTTTTCCCGGATGTTTCCGAAC	1548
DB	1522	CTAAAAGCGCTTTCTAAAACCGTGGAACTCGGAAACGATTTCTCCCGCGCTGTTCGGCA	1581
QY	1549	GTGCTCCAGAGATCATG-----GATGATGAAACTGATCGGTTTCCCTCGGAAGAGAC	1602
DB	1582	GTGCTCCAGCAGATTAATGAACTGTGAGGACTTGACTCAACTGCTTCCGGAAGAGAGAC	1641
QY	1603	ACGTCCCGCG-----GAGAAGAGGAAAGAGGTTTTCATGACCTGCGAGGATGTTCTTCAG	1653
DB	1642	ACTGCTGAGAAACGACTACAAAAGAAAGGATACATGGAATAACAGAGACACTAAAG	1701
QY	1654	AAGCATTCACAGGAGGAGGAGGAGAAATGACAGGTCGGGGCTCTGCTGCTGCTGCTCA	1713
DB	1702	AAGCGCTTTAGTGAGGCAATTTGGAATTAGGAAATTTGTCCTTGACAGATTCGACTTCT	1761
QY	1714	TCGACATCGATCGGGGCAATTCGACCAAGG	1743
DB	1762	TCCATCGAAATCAACCGGTGGAAGAGG	1791

APPLICATION NUMBER: US 60/034,382
FILING DATE: 27-DEC-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/034,730
FILING DATE: 10-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/035,021
FILING DATE: 10-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/035,022
FILING DATE: 10-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/035,024
FILING DATE: 10-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/875,015
FILING DATE: 16-JUL-1997
ATTORNEY/AGENT INFORMATION:
NAME: Meigs, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: PF/5-21215/P1/CGC1912
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919) 541-8587
TELEFAX: (919) 541-8689
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 2011 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
ORIGINAL SOURCE:
ORGANISM: Arabidopsis thaliana
FEATURE:
NAME/KEY: misc feature
LOCATION: 1..2011
OTHER INFORMATION: /note= "NIM1 cDNA sequence"
NAME/KEY: CDS
LOCATION: 43..1824
OTHER INFORMATION: /product= "NIM1 protein"
US-08-996-685-6

Query Match 20.6%; Score 420.6; DB 3; Length 2011;
Beat Local Similarity 58.4%; Pred. No. 1.4e-81;
Matches 823; Conservative 0; Mismatches 557; Indels 30; Gaps 4;

QY 352 GCGAGGAGGTGGAGTGGGTACGAGCGCTCGCGCTGGTCTCGACTACCTCTACAGC 411
DB 394 GCCAAGGATTACGAAGTCGGTTTCGATTGCGTTGTGACTGTTTGGCTTATGTTTACAGC 453
QY 412 GCGCCGCTCGCGACCTGCCCCAAGCGCGTCCCTCTGCGTCGACGAGGACTGCGCCAC 471
DB 454 AGCAGATGAGACCGCCCTAAAGAGTTTCTGAATGCGCAGACGAGAAATGCTGCCAC 513
QY 472 GTGCGGTGCCACCCCGCGCTCGGTTTCATGGCGAGGTCCTCTTCCGCGCTCCACCTTC 531
DB 514 GTGGCTTGC CGCGCGCGGTGATTTTCATGTTGGAGGTTCTCTATTGGCTTTTCATCTC 573
QY 532 CAGGTGCGCGAGCTCACCACCTCTCCAGCGCGCTCTCTTGATGTCCTTGTAAGTT 591
DB 574 AAGATCCCTGAATTAATTAATCTCTATCAGAGGCACTTATTGGACGTTGTAGACAAGTT 633
QY 592 GAAGTAGATAACCTTCTATTGATCTTATCTGTGTGCAACTATGCAACAAATCTTGCATG 651
DB 634 GTTATAGAGGACACATGTTGTTATCTCAAGCTTGCTATATATGTTGGTAAAGCTTGTATG 693
QY 652 AAATGCTTTGAAAGATGCTTGATATGGTATGGTTCGCGTCAACCTTGCATGATTAATCTT 711
DB 694 AAGCTATTGGATAGATGTAAGAGATTAATGTCAGTCTTAATGTAGATATGTTAGTCTT 753
QY 712 GAGAAGTCAATGCTCCAGATGTTTATCAAGCAGATTAATGATGACGCTTAAGCTTCGA 771

RESULT 7

US-08-996-685-7

QY 532 CAGTTCGCGAGCTCACCAACCTCTTCCAGCGCGTCTCTTGATGTCTCTTGATAGGTT 591
DB 574 AAGATCCCTGAATTAATTAATCTCTATCAGAGGCACTTATTGGAGCTGTGTAGACAAAGTT 633
QY 592 GAAGTAGATAACCTCTTATTTGATCTTATCTGTGGCAACTTATGCAACAAATCTTGCATG 651
DB 634 GTTATAGAGGACACATTTGTTATCTCAAGCTTGTCTAATATATGTGGTAAAGCTTGTATG 693
QY 652 AAATGCTTTGAAAGATGCTTATGATGTGATGTGCTGCTGCTGCTGCTGCTGCTGCTGCT 711
DB 694 AAGCTATTGGATAGATGTAAGAGATTAATGTCAAGTCTAATGTAGATGCTGCTGCTGCT 753
QY 712 GAGAAGTCTATTCCTCCAGATCTTATCAAGCAGATTAATGATGACGCTTAAAGCTCGA 771
DB 754 GAAAGTCTATTCGCGAAGAGCTTGTAAAGAGATTAATGATGAGCTTAAAGAGCTTGTGT 813
QY 772 TTAATTTCCACGAGAAACCAAGGATTTCTTAACAAACATGTGAGGAGGATACACAGAGCC 831
DB 814 TTGGAGGTACCTAAAGTAAAG-----AAACATGTCTGAATGTACATAAGCA 861
QY 832 CTTGACTCTGAGATGTAGAGCTAGTCTGAGATGTCTGCTGCTGCTGCTGCTGCTGCTGCT 891
DB 862 CTTGACTCGGATGATATTGATGTAGTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 921
QY 892 GATGATGCTTTCGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 951
DB 922 GATGATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 981
QY 952 CTTTGGGATCTCGCACTTTCGAGATGTTAATCATAGAAACCAAGAGGTTATCTGCTTCT 1011
DB 982 CTTTAAACTGATCTTGGCGATGTCAACATAGNATCCGAGGGGATATACGGTGTCT 1041
QY 1012 CACATTGCTGAGCGGAGAGAGCTTAAATCATTTGCTCTCTCTCTCTCTCTCTCTCTCTCT 1071
DB 1042 CATGTTGCTGCGATCGGAGGAGGACCAATGATCTCTCTCTCTCTCTCTCTCTCTCTCT 1101
QY 1072 CGACGAGAGATGTTACATTCATCGGAGAGAAAGCGTTCAATCTCAAAAGAGTACA 1131
DB 1102 AGTGATCAGAGCAACTTTGGAAGGTAGAACCGCACTCATGATCGCAAAACCAAGCCACT 1161
QY 1132 AAACAAGGGGATTTACTTTGGGGTTACCGAAGAGGAAACCTTCTCAAAAGATAGGTTA 1191
DB 1162 ATGGCGGTTGATGTAATAATATCCGGAGCAATCGAGCATCTCTCAAGGCGCACTA 1221
QY 1192 TGTATTGAAATCTCGAGCAAGCTGAAAGAGGAGCCCAACTCGGAGAGCATCAGTT 1251
DB 1222 TGTGTAGAAATCTAGAGCAAGAGAGCAAAACGAGAACAAATCTCTAGAGATGTTCTCTCC 1281
QY 1252 TCTCTTGCATGCGCAGGTGAGAGTCTACGAGGAGGTTGCTGTATCTTGAACACGAGTT 1311
DB 1282 TCTTTTGCAGTGGCGGCGGATGAATTTGAAGATGACGCTGCTCGATCTTGAATAATAGATT 1341
QY 1312 GCTTTGGCAAGGATTTATGTTCCGATGAGGCAAGAGTAGCAATGATATCTCAAGTG 1371
DB 1342 GCATTTGCTCAAGCTTTTTCACAGGAGGAGCAAGCTGCAATGAGATGCGGAAATG 1401
QY 1372 GATGAACTTTGGAATTTAACTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 1428
DB 1402 AAGGCAACATGTGAGTTATAGTACTAGCTGAGCTGAGCTGCTGCTGCTGCTGCTGCTGCT 1461
QY 1429 CGGACACTGTTGATCTAAATGAAGTCTTTCATATGAAGAGAGAGACACTTAGCTCGG 1488
DB 1462 AGAATCACCAGGCTGTAAGATAGCAGCTTTTCAAGATCTAGAGAGGATCAAAAGTAGA 1521
QY 1489 ATGACAGCACTCTCCAAACAGTGGAGCTCGGGAACGCTTTTCCCGGATGTTGCAAC 1548
DB 1522 CTAAAGGCTTTCTAAACCGTGAACCTCGGGAACGATTTCTTCCCGGCTGTTTCGCA 1581
QY 1549 GTGCTCGAACAGATGGA 1568
DB 1582 GTGCTCGAACAGATTAAGAA 1601

RESULT 10
US-08-989-478-9
; Sequence 9, Application US/08989478
; Patent No. 5986082
; GENERAL INFORMATION:
; APPLICANT: Uknes, Scott
; APPLICANT: Hunt, Michelle
; APPLICANT: Steiner, Henry-York
; APPLICANT: Ryals, John
; TITLE OF INVENTION: ALTERED FORMS OF THE NIM1 GENE CONFERRING
; TITLE OF INVENTION: DISEASE RESISTANCE IN PLANTS
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESS: No. 5986082artis Corporation
; STREET: 3054 Cornwallis Road
; CITY: Research Triangle Park
; STATE: No. 5986082th Carolina
; COUNTRY: USA
; ZIP: 27709
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/989.478
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/033.177
; FILING DATE: 13-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034.379
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034.382
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034.730
; FILING DATE: 10-JAN-1997
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/035.021
; FILING DATE: 10-JAN-1997
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/035.022
; FILING DATE: 10-JAN-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Weigs, J. Timothy
; REGISTRATION NUMBER: 38,241
; REFERENCE/DOCKET NUMBER: PF/S-21214/P1/CGC1911
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (919) 541-8587
; TELEFAX: (919) 541-8689
; INFORMATION FOR SEQ ID NO: 9:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1597 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 1..1410
; OTHER INFORMATION: /product= "Altered form of NIM1"
; OTHER INFORMATION: /note= "N-terminal deletion compared to wild-type NIM1"
; OTHER INFORMATION: sequence."

Query Match 20.1%; Score 409.2; DB 2; Length 1597;
Best Local Similarity 58.3%; Pred No. 3.7e-79;
Matches 808; Conservative 0; Mismatches 548; Indels 30; Gaps 4;

QY 376 GAGCGCTGCGGCTGGTCTCGACTCTACAGCGCGCTCGCGCAAG 435

Db	4	GAATCGGTTGACGATGTTTGGCTTATGTTTACAGCAGCAGAGTGAGACCGCCGCTTAA	63
Qy	436	GGCGGCTGCTCGCTCGAGGACGCGCCACGTCGGGTCCACCCCGCGCGCG	495
Db	64	GGAGTTTCTGAATGCGCAGCAGAGAAATGCTGCACAGTGGCTTCCGCGCGCGCGTGGAT	123
Qy	496	TTATGCGCAGGTCCTCTTCCCGCCTCCACCTTCAGGTCGCGGCTCACCAACCTC	555
Db	124	TTCAATGTTGGAGGTTCTCTATTGCTTTCATCTTCAAGATCCCTGAAATTAATCTCTC	183
Qy	556	TTCCAGCGGCTCTCTGATGCTCTGATAGGTTGAAGTAGATAACCTTCTATTGATC	615
Db	184	TATCAGAGCATTATTGACGTTGTAGACAAAGTTGTATAGAGGACACATTGGTTATA	243
Qy	616	TTATCTGTTGCCAATTATGCAACAAATCTTCATGAACTGCTTGAAGATGCTTGAT	675
Db	244	CTCAAGCTTGCTAAATATATGTTGTTAAAGCTTGTATGAAAGCTATTGGATAGATGAAAGAG	303
Qy	676	ATGGTAGTCGGTCAAACTTGACATGATTACTCTTGAAGCTCAATGCTCCAGATGTT	735
Db	304	ATTATTGTCAGTCTAATGTAGATATGGTTAGTTCTTGAAGCTCATTCGCGGAAGAGCTT	363
Qy	736	ATCAAGCAGATTATTGATCGCCCTTAAGCCTCGGATTAATTTCAACGAGAAACAGGGA	795
Db	364	GTTAAAGAGATAATTGATAGACGTAAGAGCTTGGTTTGGAGGTACCTAAAGTAAAG---	420
Qy	796	TTTCTTAAACAACTGTGAGGAGTACACAGAGCCCTTGACTCTGACGATGTAGAGCTA	855
Db	421	-----AAACATGCTCGAATGTACATAAGGACCTTGACTCTGAGTATATTGAGTTA	471
Qy	856	GTGAGATGCTGCTCACTGAAGCAGACAGAAATCTTGATGATGCGTTTGCACGTCACTAC	915
Db	472	GTCAAGTTGCTTTGAAAGAGGATCACCAATCTAGATGATGCGTGTGCTCTTCAATTC	531
Qy	916	CCGTCGAACTTTGACTCCAAATTAACCGAGCTTTTGGATCTGCACTTCAGAT	975
Db	532	GCTGTTGCAATTGCAATGTGAAGACCGCAACAGATCTTTTAAACTTGATCTTCCGAT	591
Qy	976	GTTAATCATAGAAACCAAGAGGTTATCTGTTCTTCAATGCTCGGAGCGAAGAG	1035
Db	592	GTCAACCATAGGAATCGAGGGATATAGCTGCTTCTGCTGCGATGCGGAAGAG	651
Qy	1036	CCTAAATCATGTTCTCCCTTTTAAACAGGGGCTGACAGAGATGTTCAATTCAT	1095
Db	652	CCCAATTTGATCTATCTTATGGAAGAGTGAAGTGCAGTCAAGCAACTTTTGA	711
Qy	1096	GGGAGAAAGCGGTTCAAAATCTCAAAAGACTAACAAACAGGGGATTTACTTTGGGTT	1155
Db	712	GTTAGAACCGACTCATGTCGCAACAGCCACTATGCGGTTGAATGTAATAATC	771
Qy	1156	ACGAAAGAGAAACCTCTTCCAAAGATAGGTTATGTTAATATCTGGAGCAAGCT	1215
Db	772	CCGAGCAATGCAAGCAATCTCTCAAGGCGCTATGTTAGAAATCTAGAGCAAGAA	831
Qy	1216	GAAGAGGAGCCACCACTCGGAGAGCATGTTCTTCTGCAATGGCAGGTGAGAT	1275
Db	832	GACAAACAGAAACAAATCTTAGAGATGTTCTCCCTCTTTTTCAGTGGCGCGGATGA	891
Qy	1276	CTAGAGAGGTTGCTGTATCTTTGAAAACGAGTTGCTTTGGCAAGGATTTGTTCCG	1335
Db	892	TTGAAGATGACGCTGCTCGATCTTTGAAATAGAGTTGCACTTCTCAAGCTCTTTTCA	951
Qy	1336	ATGGAGGAGAGTAGCAATGATTTGCTCAAGTGATGAACTTTGGAAATTAACCTG	1395
Db	952	ACGGAAGCACAAGTGCATGGAGATCGCGAAATGAAGGACATGTGATTCATG	1011
Qy	1396	---GCTTCTGTCGAAATCCACCTCCTGAAAGACCAACGGAACAATGTTGATCTAAATGA	1452
Db	1012	ACTAGCCTCGAGCTGACCGCTCTCACTGTTACGAAGAGAACATCACCGGTTGAAAGATA	1071
Qy	1453	AGTCTTTTCAATGAAGAGACACTTACTCGGATGACGACCTCTCCAAACAGTG	1512

1-800-996-685-9

1-800-996-685-9

RESULT 12
US-08-989-478-13
; Sequence 13, Application US/08989478
; Patent No. 5986082
; GENERAL INFORMATION:
; APPLICANT: Uknes, Scott
; APPLICANT: Hunt, Michelle
; APPLICANT: Steiner, Henry-York
; APPLICANT: Ryals, John
; TITLE OF INVENTION: ALTERED FORMS OF THE NIM1 GENE CONFERRING
; TITLE OF INVENTION: DISEASE RESISTANCE IN PLANTS
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: NO. 5986082artis Corporation


```

STREET: 3054 Cornwallis Road
CITY: Research Triangle Park
STATE: No. 5986082th Carolina
COUNTRY: USA
ZIP: 27709
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/989,478
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/033,177
FILING DATE: 13-DEC-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/034,379
FILING DATE: 27-DEC-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/034,382
FILING DATE: 27-DEC-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/034,730
FILING DATE: 10-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/035,021
FILING DATE: 10-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/035,022
FILING DATE: 10-JAN-1997
ATTORNEY/AGENT INFORMATION:
NAME: Neigs, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: PF/5-21214/P1/CGC1911
TELEPHONE: (919) 541-8587
TELEFAX: (919) 541-8689
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 1194 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: CDNA
FEATURE:
NAME/KEY: CDS
LOCATION: 1..1194
OTHER INFORMATION: /product= "Altered form of NIM1"
OTHER INFORMATION: /note= "N-terminal/C-terminal chimera."
US-08-989-478-13

Query Match 19.6%; Score 400.4; DB 2; Length 1194;
Best Local Similarity 59.8%; Pred. No. 2.6e-77;
Matches 715; Conservative 0; Mismatches 466; Indels 15; Gaps 2

Qy 376 GAGGCGCTCGGGCTGGTGTGCAGTACCTCTACAGCGCGCGCTGCGCGAGCTGCCCAAG 435
Db 4 GATTTCGGTTGTGACTGTTTGGCTTATGTTTACAGCAGCAGAGTGAGACCGCGCGCTAA 63
Qy 436 GCGGCGTGGCTCTGGGTGACGAGAGACTGGCCCACTGCGGGTGCACCCCGCGCTCGG 495
Db 64 GGAAGTTTCTGAATGGCGACAGAGAAATGCTGCGCACGTGGCTTGC CGGCGCGGTGGAT 123
Qy 496 TTCAATGCGCAGGTCTCTTCTTCGCCGCCTCCACCTTCCAGGTCGCGGAGCTCACAACTTC 555
Db 124 TTCAATGTTGAGGTTCTCTATTTTGGCTTTCATCTTCAAGATCCCTGAATTAATTACTCTC 183
Qy 556 TTCACGCGGGCTCTCCTTGATCTCTGNTAAGTTCGAAGTAGATAACCTTCTATTGATC 615
Db 184 TATTCAGAGGCACATTATTGGACGCTGTAGACAAAGTTGTTATAGAGGACACATTGGTTATA 243

```

RESULT 13
US-08-996-685-13
; Sequence 13, Application US/08996685
; Patent No. 6031153
; GENERAL INFORMATION:
; APPLICANT: Ryals, John
; APPLICANT: Friedrich, Leslie
; APPLICANT: Uknes, Scott

APPLICANT: Molina, Antonio
APPLICANT: Rues, Wilhelm
APPLICANT: Knauf-Beiter, Gertrude
APPLICANT: Kung, Ruth
APPLICANT: Keesmann, Helmut
APPLICANT: Oostendorp, Michael
TITLE OF INVENTION: METHOD FOR PROTECTING PLANTS
NUMBER OF SEQUENCES: 32
CORRESPONDENCE ADDRESS:
ADDRESSEE: No. 603153artis Corporation
STREET: 3054 Cornwallis Road
CITY: Research Triangle Park
STATE: No. 603153th Carolina
COUNTRY: USA
ZIP: 27709
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/996,685
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/761,543
FILING DATE: 6-DEC-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/034,378
FILING DATE: 27-DEC-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/034,379
FILING DATE: 27-DEC-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/034,382
FILING DATE: 27-DEC-1996
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/034,730
FILING DATE: 10-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/035,021
FILING DATE: 10-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/035,022
FILING DATE: 10-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/035,024
FILING DATE: 10-JAN-1997
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/875,015
FILING DATE: 16-JUL-1997
ATTORNEY/AGENT INFORMATION:
NAME: Meigs, J. Timothy
REGISTRATION NUMBER: 38,241
REFERENCE/DOCKET NUMBER: PF/5-21215/PL/CGC1912
TELEPHONE: (919) 541-8587
TELEFAX: (919) 541-8689
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 1194 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cdna
FEATURE:
NAME/KEY: CDS
LOCATION: 1..1194
OTHER INFORMATION: /product= "Altered form of NIM1"
OTHER INFORMATION: /note= "N-terminal/C-terminal chimera."
US-08-996-685-13

Query Match

19.6%; Score 400.4; DB 3; Length 1194;

Best Local Similarity 59.8%; Pred. No. 2.6e-77;
Matches 715; Conservative 0; Mismatches 466; Indels 15; Gaps 2;
QY 376 GAGCGCTGCGGCTGGTCTCGACTACCTCTACAGCGCGCGTGGGACCTGCGGACCTGCCAAG 435
DB 4 GATTCGGTGTGACTGTTTGGCTTATGTTTACAGCAGAGAGTGGACCGCGCTTAA 63
QY 436 GCGGCTGCCCTCTGGTCTGACAGAGACTGCGCCCAAGTGGGTCACCCCGCGCTCGG 495
DB 64 GGAGTTTCTGAATGCGCAGACAGAAATGCTGCCACGTGGTGGTGGCGCGCGCTGGAT 123
QY 496 TTCATGGCGCAGGTCCTCTTCCGCGCTCCACCTTCCAGGTCGCGAGCTCACCACTC 555
DB 124 TTCATGTTGGAGGTTCTCTATTTGGCTTTTCATCTTCAAGATCCCTGAAATTAATTA 183
QY 556 TTCAGCGCGCTCCTTGTATGTCCTTGAAGGTTGAAGTAGATAAATCTTCTATTGATC 615
DB 184 TATCAGAGCACTTATTTGGAGCTTGTAGACAAAGTTGTATAGAGCACATTTGGTTATA 243
QY 616 TTATCTGTGTCACCTTATGCAAAATCTTGTGATGAACTGCTTGAAGATGCCCTGAT 675
DB 244 CTCAAGCTTGCTAATATATGTTGTAAGCTTGTATGAAGCTATTGGATAGATGTAAGAG 303
QY 676 ATGGTAGTCCGCTCAAACTTGTGATGATTACTCTTGAGAGTCAATCCCTCCAGATGT 735
DB 304 ATTATGTTCAAGTCTAATGTAGATATGTTAGTCTTGAAGAGTCAATCCCGAAGAGCT 363
QY 736 ATCAAGCAGATTTATGTCACGCTAAGCTCGGATTAATTTACACAGAAACAAAGGA 795
DB 364 GTTAAAGAGATATTTAGAGCTTAAGAGCTTGGTTGGAGGTACCTTAAGTAAG--- 420
QY 796 TTCTCTAAACAAATGTGAGGAGGATACAGAGCCCTTGTACTCTGACGATGTAGAGCTA 855
DB 421 -----AAACATGCTCGAATGTACATAAGGCACCTGACTCGGATGATATTGAGTTA 471
QY 856 GTCAGGATGCTCTCACTGAAGGACAGACAATCTTGTATGATGCTGCTTTCACACTGCAC 915
DB 472 GTCAGGTTGCTTTTGAAGAGGATCACACCAATCTAGATGATGCGTGTGCTCTTCATTT 531
QY 916 GCGGTCGAACATTTGTGACTCCAAAATTAACAAACGAGCTTTTGGATCTCGCACTTCAG 975
DB 532 GCTGTTGCATATTGCAATGTGACCCCAACAGATCTTTTAAACTTTGATCTTCCCAT 591
QY 976 GTTAATCATAGAAACCCCAAGAGGTTATATCTTTTCACTTGTGTCGAGCGGAAGAG 1035
DB 592 GTCAACCATAGGAATCCGAGGGGATATACGGTGTCTTCACTGCTGCGATGCGGAAGAG 651
QY 1036 CCTAAATCATTTGCTCCCTTTTAAACNAGGGGCTCGACAGCAGATGTTACATTCAT 1095
DB 652 CCACAAATTGATATCTCTATTGGNAAAGGTGCAAGTGCATCAGAAAGCACTTTGGAA 711
QY 1096 GGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAAACAAAACAGGGGATTTACTTTGGG 1155
DB 712 GGTAGAACCGCACTCATGATCGCAAAACAGCCACTATGGCGGTTGAATTAATATATC 771
QY 1156 ACCGAAGAAGGAAAACCTTTCCAAAAGATAGGTTATGTATTGAAATCTGGAGCAAGT 1215
DB 772 CCGGAGCAATGCAAGCATTTCTCTCAAGGCGCACTATGTGTAGAAATCTAGAGCAAGAA 831
QY 1216 GAAAGAAGGGACCCCAACCTCGGAGAGACATCAGTTTCTTTCNATGGCAGGTGAGAGT 1275
DB 832 GACAAAACGAGAAACAAATTTCTTAGAGATGTTCTCTCCCTCTTTTGCAGTGGCGCG 891
QY 1276 CTACGAGGAAGGTTGCTGTATCTTTGAAAACCGAGTTGCTTTGGCAAGGATTTATGTTCC 1335
DB 892 TTGAAGATGACGCTGCTGATCTTTGAAAATAGAGATTTGCACTTGTCTCAACGCTTT 951
QY 1336 ATGGAGGCAAGAGTAGCAATGATATTGCTCAAGTGGATGGAACCTTTGGAATTTAACCTG 1395
DB 952 ACGAAGCACAAGCTGCAATGAGATCGCCGAAATGAAGGGAACATGTGAGTTCATAGTG 1011
QY 1396 ---GGTTCTGTGCAAAATCCACCTCTCTGAAAGACAAACGAGCAACCTGTTGATCTCTAA 1452

Db 1012 ACTAGCCTCGAGCTGACCGCTCTACTCGGTACGAAGAGAAACATACCGGGTGTAAAGATA 1071
 Qy 1453 AGTCTTTTCATAATGAAGAAGAACACATTAGCTCGGATGACAGCACTCTCCAAACAGTG 1512
 Db 1072 GCACCTTTTCAGATCTTAGAGAGATCAAAAGTAGACTTAAAGCGCTTTTAAACCGTG 1131
 Qy 1513 GAGCTCGGGAACCGCTTTTCCGCGATGTTTCGAACGTCGTCGCAAGATCATGA 1568
 Db 1132 GAACTCGGGAACGATTTCTTCCGCGCTGTTCCGCGAGTCTCGACAGATATGAA 1187

RESULT 14

US-09-519-232-5

; Sequence 5, Application US/09519232

; Patent No. 6528702

; GENERAL INFORMATION:

; APPLICANT: Salmemon, John

; APPLICANT: Weislo, Laura

; APPLICANT: Millits, Michael

; APPLICANT: Mengiste, Tesfaye

; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF

; FILE REFERENCE: S-30857A/RTP2095

; CURRENT APPLICATION NUMBER: US/09/519,232

; CURRENT FILING DATE: 2000-03-06

; NUMBER OF SEQ ID NOS: 74

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 5

; LENGTH: 1740

; TYPE: DNA

; ORGANISM: Brassica napus

; FEATURE:

; NAME/KEY: CDS

; LOCATION: (1) (1737)

; OTHER INFORMATION: Canola cDNA sequence

US-09-519-232-5

Query Match 18.7%; Score 381.8; DB 4; Length 1740;
 Best Local Similarity 58.4%; Pred. No. 3e-73;
 Matches 812; Conservative 3; Mismatches 510; Indels 66; Gaps 6;
 Qy 351 CGCGAGGAGGTGGAGGTGGGTGACGAGCGCTGGGGCTGGGTGCTCGACTACTCTACAG 410
 Db 345 CGCGGCGGAATACGAGCTCGGGTTCGATTCGTGGTGGCTGTTCTCGGTACGTTTACAG 404
 Qy 411 CGGCGCGTGGCGACCTGCCAAGCGCGGTGCTCTCGCTCGAGAGGACTGCGCCCA 470
 Db 405 CGCGAGGTGAGCGCCCTCCGAAGGGAGTTTCTGAATCGCGAGACGAKAGCTGCTGCCA 464
 Qy 471 CGTGGGTGCCACCCCGCGTTCGCTTCATGGCGAGGTCTCTTCGCGCGCTCCACCTT 530
 Db 465 CGTGGGTGCCGTCCGCTGTTGATTTTCATGGTGGAGTTCTTACTTGGCTTTGCTTT 524
 Qy 531 CCAGGTGCGCGAGCTCACCACCTCTTCCAGCGGCTCTCTTGATGCTCTTTGATAAGGT 590
 Db 525 CCAGATTCCAGGAAGTGTACCATGATATCAGAGGCAATTTACTGGATGTTGTAGACAAAGT 584
 Qy 591 TGAAGTAGATAACCTTCTATGATCTATCTGTGCGCACTATGCAAAATCTTGAT 650
 Db 585 TAWCATAGAAGACACTTTGGTCTCTCAAGCTTGTCTCACTCTCGGTAAGCGGTGCA 644
 Qy 651 GAACTGCTTGAAGATGCTTGTATGTTAGTTCGCGTCAACCTTGACATGATTAATCT 710
 Db 645 GAAGCTATTGATAGTGCAGAGAGATCATTTGCAAGTCTTAAGGTGATGTTGTTACTCT 704
 Qy 711 TGAAGAGTCAATGCTCCAGATGTTATCAAGCAGATATTATGATGCAAGCTTAAAGCTCGG 770
 Db 705 AAAGAAAGTCAATGCTCCAGACATTCGCAAGCAAGTAATCGATATCCGCAAAAGCTCGG 764
 Qy 771 ATTAATTTACCAAGAAACAGGGATTTCTTAACAAACATGTGAGAGGATACAGAGC 830
 Db 765 CTTGGAGGTAGCTGAA-----CCAGAGAAACATGTCTCCAAATACAGAGC 812
 Qy 831 CTTTGACTCTGACGATGTAGAGCTAGTTCAGGATGCTGCTCACTGAGAGACAGACAAATCT 890

Db 813 GCTTGAATCAGACGATCTTGACCTTGCTGTATGCTTTTGAAGAGGCGCCACAGATCT 872
 Qy 891 TGATGATGCGTTTGCACTACGCCGTGCAACATTGTGACTCCAAAATTACAACCGA 950
 Db 873 AGACGAAGCGTATGCTCTCCATTGCTGCTGCGATTTGCGATGAGAAGACAGCGAGAA 932
 Qy 951 GCTTTTGGATCTCGCACTTCAGATGTTAATCATAGAAACCCAGAGGTTATATCTGTTCT 1010
 Db 933 TCTCTCGAATCTGGGTTTTCGGATGTCAACCGGAGAAACCCGAGAGGGTACACGGTAAT 992
 Qy 1011 TCACATTGCTCGAGGCGAAGAGAGCCCTAAATCATTTGCTCTCCCTTTTAAACCAAGGGGC 1070
 Db 993 TCAGCTCGCTCGATGAGAAAGAGCCGACACTGATAGCATTTGTTGTAGCAAGGGGC 1052
 Qy 1071 TCGACCAAGAGATGTATACATTTCGATGGGAGAAAGCGGTTCAAATCTCAAAAGACATAAC 1130
 Db 1053 TAATGCATTAGNAATGCTTTTGGACGGGAGAACTGCTCTGTTGATCGGAAACAAAGTCAC 1112
 Qy 1131 AAAACAAGGGATTTACTTTGGGGTTACCGAGAGGAAACCTTCTCCAAAAGATAGTT 1190
 Db 1113 TA---AGCGCGCCGAGTGTGTTATTTGGAGAAAGGGAAGTTAGCTCTCCAAAGCGGAGT 1169
 Qy 1191 ATGTATTGAATACTCGAGCAAGCTGAAAGAA---GGGACCCCAACACTCGGAGAGCATC 1247
 Db 1170 ATGTGTAGATACTCAAGCAACCCAGACACACAGAGAACCAATTTCTCTGAAGATGTTTC 1229
 Qy 1248 AGTTTCTCTGCAATGCGAGGTGAGTCTACGAGGAGGTTGCTGTATCTTTGAAACCG 1307
 Db 1230 TCCCTCCCTTGCAGTGGCTGCTGATCAATTCAGATAAGGTTGATGATCTTTGAAACAG 1289
 Qy 1308 AGTTGCTTTGGCAAGGATTTATTTCCGATCGAGGCAAGAGTAGCAATGGATATTGCTCA 1367
 Db 1290 AGTTCAATGGCTCGATGCTCTATCCAAATGGAAGCACAAGTTGCAATGGATTTTCGCCG 1349
 Qy 1368 AGTGGATGGAATTTTGGAAATTAACCTGGGTTCTGTTGCAAAATCCACCTCTGAAAGACA 1427
 Db 1350 AATGAAGGAACACGCGAGTTTGTGCTG----- 1377
 Qy 1428 ACGGACAACTGTTGATCTAAATGAAGTCTTTTATATGAAGAGAACACTTAGCTCG 1487
 Db 1378 -ACGACGAACTGACCTACACATGGAACCTTTTCAAGTTCTGAGAAATGCAATCAGAGTAG 1436
 Qy 1488 GATGACACACTCTCCAAACAGATGGAGCTCGGAAACGCTTTTCCCGCGATGTTCCGAA 1547
 Db 1437 ACTAACGCGTTTCTAAACTGTGGAATTCGGAAGAGCTTCTTCCACGCTGTTCCGAA 1496
 Qy 1548 CGTCTCGCAAGATCATGATGATGA-----AATGATCCGTTTCCCTCGGAGAGA 1601
 Db 1497 AGTGTCTGATGATATTGTTGACTCTGAGGACTTGTACTATCTGCTCTCTGTAAGAGA 1556
 Qy 1602 CACGTCCCG-----GAGAAGGAAGAGGTTTTCATGACCTGCAAGGATGTTTCTCA 1652
 Db 1557 CACTCTGAGCAACGACAAACAAAGAGGAGGTTTATGGAATATACAGGAGATTGTTCA 1616
 Qy 1653 GAAGCAATTCACGAGGACAAAGAGGAGGAAATGACAGGTCGGGGCTCTCGTCTGCTCGTC 1712
 Db 1617 AATGCGTTTAGTAAAGACAGGAGGACTTGGAAAGTCTCTCTCTCAGCTTCTGCTTC 1676
 Qy 1713 ATCGACATCGA 1723
 Db 1677 TTCCACATCCA 1687

RESULT 15

US-09-519-232-19

; Sequence 19, Application US/09519232

; Patent No. 6528702

; GENERAL INFORMATION:

; APPLICANT: Salmemon, John

; APPLICANT: Weislo, Laura

; APPLICANT: Millits, Michael

; APPLICANT: Mengiste, Tesfaye

! TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
! FILE REFERENCE: S-30857A/RTP2095
! CURRENT APPLICATION NUMBER: US/09/519,232
! CURRENT FILING DATE: 2000-03-06
! NUMBER OF SEQ ID NOS: 74
! SOFTWARE: PatentIn Ver. 2.1
! SEQ ID NO 19

! LENGTH: 1803
! TYPE: DNA
! ORGANISM: Arabidopsis thaliana
! FEATURE:
! NAME/KEY: CDS
! LOCATION: (1)..(1803)
! OTHER INFORMATION: AtNMLc4-2 genomic sequence
US-09-519-232-19

Query Match 18.6%; Score 380.4; DB 4; Length 1803;
Best Local Similarity 57.4%; Pred. No. 6.1e-73;
Matches 778; Conservative 0; Mismatches 551; Indels 27; Gaps 4;

QY 351 CGCGAGAGGTGGAGTGGGTACGAGCGCTGCGGTGGGTGCTCGACTACCTCTACAG 410
DB |||||
QY 348 CGCCAGAGATTACGAAGTGGCTTTGACTCGGTGGGTGGGTGGGTGGGTGGGTGGGT 407
DB |||||
QY 411 CGGCGCGCTCGCGACCTGCCAAGCGCGCTGCTGCTGCGTGGAGGAGTGGCGCCA 470
DB |||||
QY 408 CGCGAGAGTGGTCCCGCGCGAAGGAGCTTCTGCTGCGTGGAGCGAGATTGTTGCCA 467
DB |||||
QY 471 CGTGGGTGGCCACCGCGCGCTGCGCTTCATGGCGGAGTCTCTTCGCGCGCTCCACCTT 530
DB |||||
QY 468 CGTGGCTTGGCGGTCAAGGTGGATTTCATGGTGGAGTCTTTATCTGCTCTTTCGTTT 527
DB |||||
QY 531 CCAGTCCCGGAGTCAACAACTCTTCCAGCGCGCTCTCTTGTGATGCTCTTGTGATGAGGT 590
DB |||||
QY 528 CCAGATTCAAGAAATTAGTACTCTGTATGAGAGGAGTCTTGGAAATTGTAGACAAAGT 587
DB |||||
QY 591 TGAAGTAGATACCTTCTATTGATCTTATCTGTTGCCAATTCATGCAACAATCTTGAT 650
DB |||||
QY 588 TGTAGTGAAGACATCTTGGTGTATATCAAGCTTGATATCTATGTGTGATCAACATACAA 647
DB |||||
QY 651 GAACTGCTTGAAGATGCTTGTATGTTAGTTCGGTCAACCTTGCATGATGATTTACTCT 710
DB |||||
QY 648 GAAGCTTTGGATAGATGATAGAAATTTATCGTGAAGTCTGATATAGAACTAGTTAGTCT 707
DB |||||
QY 711 TGAGAAGTCAATGCTCCAGATGTTTATCAAGCAGATTTATGATGACGCTTAAGCGCTCGG 770
DB |||||
QY 708 TGAGAAGTCTTTACCTCAACACATTTTCAAGCAATCATAGACATCCCGGAGCGCTCTG 767
DB |||||
QY 771 ATTAATTTTACCAGAAACAGAGGATTTCTTAACAAACATGTGAGGAGGATACACAGAGC 830
DB |||||
QY 768 TCTAGAGCCCTAAA-----CTAGAAAGGCATGTCAAGAACATATACAGGC 815
DB |||||
QY 831 CTTGACTCTGAGATGTAGAGTGTAGTGTGAGTGTGCTCACTGAAGGACAGACAAATCT 890
DB |||||
QY 816 CTTGACTCTGAGATGTAGTGTGAGTGTGCTCACTGAAGGACAGACAAATCT 875
DB |||||
QY 891 TGATGATGCTTGTGACTGCACTACGCGTGGAAACATTTGACTCCAAATTTACAAACCGA 950
DB |||||
QY 876 CGATGAGCGTATGCTCTTCAATTTTGTCTATCGCTCACTGCGGTGTGAAGCGCGTATGA 935
DB |||||
QY 951 GCTTTTGGATCTCGGACTTGCAGATGTTTAAATCATAGAAACCAAGAGGTTTATCTGTTCT 1010
DB |||||
QY 936 TCTCCTCGAGCTTGAGCTTGGGATGTTAAACCTTAGAAATCCGAGGGGATACACTGTGCT 995
DB |||||
QY 1011 TCACATTCCTGCGAGCGCAAGAGGCTTAAATCATCTCTCTCTCTCTCTCTCTCTCTCTCTCT 1070
DB |||||
QY 996 TCATGTTCTGCGATGCGGAGGAGGCGGAGTGTGATATATCTTTGTTTAAAGAGGGGC 1055
DB |||||
QY 1071 TCGACAGCAGATGTTTACATTCGATGGAGAGGCGGTTCAAATCTCAAAAGAGACTAAC 1130
DB |||||
QY 1056 AAATATTTTACACACAACTTGGATGTTAGAACCGCTTTAGTGTGTTAAACGACTCAC 1115
DB |||||
QY 1131 AAACAAGGGGATTTACTTTGGGGTTTACCGAAGAGGAAAACTTCTCTCAAAAGATAGGTT 1190
DB |||||

Search completed: December 7, 2003, 00:31:00
Job time : 131 secs

DB 1116 TAAAGCGGATGACTACAAAACCTAGTACGGAGGACGGTACGCTTCTCTGAAAGCGGAT 1175
QY |||||
DB 1191 ATGTATTGAAATACTGGAGCAAGCTGAAAGAGGG---ACCCACAACTCGGAGAGCATC 1247
QY |||||
DB 1176 ATGCATAGAGTACTTGGAGCATGAACAAAACCTAGAAATATTTGTCGCTATAGAGGCTTC 1235
QY |||||
DB 1248 AGTTTCTTTCGAATGGCAGGTGAGAGTCTACGAGGAAAGTTGCTGTATCTTTGAAACCG 1307
QY |||||
DB 1236 ACTTTCTCTCCAGTAACTCCAGAGGAGTTGAGGATGAGGTTGCTCTATTATGAAACCG 1295
QY |||||
DB 1308 AGTTGCTTTGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTACCAATGGATATTGCTCA 1367
QY |||||
DB 1296 AGTTGCACTTCTCGACTTCTCTTCCAGTGGAACTGAAACTGTACAGGGTATTGCCAA 1355
QY |||||
DB 1368 AGTGATGGAACTTTGGAAATTTA---ACCTGGGTCTGGTGCAAATCCACCTCTCTGAAAG 1424
QY |||||
DB 1356 ATTGGAGGAACATGCGAGTTTACAGCTTCTAGTCTCGAGCTGATCATCATTTGGTGA 1415
QY |||||
DB 1425 ACAACGGACAACTGTTGATCTAAATGAAAGTCTTTTCAATGAAAGAGAACACTTAGC 1484
QY |||||
DB 1416 AAAGCGGACATCACTAGACCTAAATATGGCGCGTTCCAAATCCATGAGAGCATTTGAG 1475
QY |||||
DB 1485 TCGGATGACAGCACTCTCCAAACAGTGGAGCTCGGNAACGCTTTTCCCGCGATGTTTC 1544
QY |||||
DB 1476 TAGACTAAGAGCACTTTGTAACCGGTGGAACTGGGNAACGCTACTTCAACCGATGTTTC 1535
QY |||||
DB 1545 GAACTGCTCGCAAGATCATGGATGATGAAACTGATCCGGTTCCTCCCTCGGAAGAGACAC 1604
QY |||||
DB 1536 GCTTGTATCACTTTATGATCTAGAGTCTTGAATCACTTCTAGCTAGCGGTAGAGAGATAC 1595
QY |||||
DB 1605 GTCCGCG-----GAGAAAGAGAGAGTTCATGACCTGCAAGGATGTTCTTTTCAGAA 1655
QY |||||
DB 1596 TCCTGAGAAACGGCTACAAAAGAGCAAGGTACATGGAACTACAAGAGACTCTGATGAA 1655
QY |||||
DB 1656 GGCATTCCACGAGCAAGGAGGAGGAGTGCAGAGTC 1691
QY |||||
DB 1656 GACCTTTAGTGAGGACAAAGGAGGAGTGTGGAAGTTC 1691
QY |||||

